AECC – 1.2

ಪ್ರಥಮ ಸೆಮಿಸ್ಟರ್ ಬಿ.ಎಸ್ಸಿ. ಪದವಿ ಪರೀಕ್ಷೆ, ಮೇ / ಜೂನ್ 2022

(NEP Scheme)

ಕನ್ನಡ ಭಾಷೆ

Paper – 01 : ಕನ್ನಡ ವೈಭವ

Max. Marks : 60

Time : 2½ Hours

I. ಕೆಳಗಿನ ಯಾವುದಾದರೂ **ಆರಕ್ಕೆ** ಉತ್ತರಿಸಿ. **(6×2=12)**

1) ದೇವರ ದುಡಿ.

2) ದ. ರಾ. ಬೇಂದ್ರೆ.

3) ಗೂಡು ಕಟ್ಟಿ ನಾಡ ಸೆರಗಿನಲಿ.

4) ಚಪ್ಪಾಣಿ ಕಣಿವಿ.

5) ನವೋದಯ ಸಾಹಿತ್ಯ.

6) ಪಾಪು.

7) ಕಾಣೆಯ ಕುಟುಂಬ.

8) ಅಪ್ಪನ ಸಾವು.

9) ಪಾಗೇಶ್ ಹೆಗಡೆ.

II. ಕೆಳಗಿನ ಯಾವುದಾದರೂ **ನಾಲ್ಕು** ಪ್ರಶ್ನೆಗಳಿಗೆ ಸಂಕ್ಷಿಪ್ತವಾಗಿ ಉತ್ತರಿಸಿ. **(4×6=24)**

10) 'ಶುಕ್ತಿಸ ಚೀಲ' ಕವನದಲ್ಲಿ ಶ್ರೀಮಂತರ ಅಮಾನವೀಯ ವರ್ತನೆ.

11) ಕುಟುಂಬದ ಬೆಳಕು.

12) 'ಭಂಡರು' ಕವನದ ಸ್ತ್ರೀ-ಸಂವೇದನೆ.

13) ಮೇರಿಯ ವ್ಯಕ್ತಿತ್ವ.

14) ಲೇಖಕರ ನೆನಪುಗಳಿಂದ ಮೂಡಿಬರುವ ಅಪ್ಪನ ವ್ಯಕ್ತಿತ್ವ.

15) 'ಟೊಮೇಟೋ' ಕುರಿತು ಇದ್ದ ಅಪನಂಬಿಕೆಗಳು.

P.T.O.

AECC – 1.2

III. ಕೆಳಗಿನ ಯಾವುದಾದರೂ **ಮೂರು** ಪ್ರಶ್ನೆಗಳಿಗೆ ವಿವರವಾಗಿ ಉತ್ತರಿಸಿ. **(3×8=24)**

16) ನಾಡಾಭಿಮಾನದ ಸ್ವರೂಪ 'ನಾಡಿನ ಏಕತೆ' ಕವಿತೆಯಲ್ಲಿ ಹೇಗೆ ಚಿತ್ರಿತವಾಗಿದೆ ? ವಿವರಿಸಿ.

17) 'ಕತ್ತೆ ಮತ್ತು ಧರ್ಮ' ಕವನದ ಆಶಯವನ್ನು ವಿವರಿಸಿ.

18) ಶಿಥಿಲಗೊಳ್ಳುತ್ತಿರುವ ಮಾನವ ಸಂಬಂಧಗಳು 'ಪ್ರಯಾಣ' ಕಥೆಯಲ್ಲಿ ಹೇಗೆ ಅನಾವರಣಗೊಂಡಿದೆ ? ವಿವರಿಸಿ.

19) ಕಾಣಿಯ ದುರಂತವು 'ಕೊನೆಯ ಗಿರಾಕಿ' ಕಥೆಯಲ್ಲಿ ಹೇಗೆ ಚಿತ್ರಿತವಾಗಿದೆ ? ವಿವರಿಸಿ.

20) 'ಟೊಮೇಟೋ' ಲೇಖನದ ವೈಶಿಷ್ಟ್ಯವನ್ನು ವಿವರಿಸಿ.

DCCN – 103

First Semester B.Sc. Degree Examination, May/June 2022
(NEP Scheme)
CLINICAL NUTRITION AND DIETETICS
Food Sanitation and Hygiene

Time : 2½ Hours

Max. Marks : 60

PART – A

I. Answer **any 6** of the following : (6×1=6)

1) Expand IPM program.
2) FSSAI.
3) Hygiene.
4) Thawing.
5) Define foreign objective in food safety.
6) Expand MSDS.
7) Perishable foods.
8) Handwashing and its importance in food safety.

PART – B

II. Answer **any 6** of the following : (6×2=12)

9) Differentiate between cleaning and sanitization in food safety.
10) Define chemical hazard with example.
11) Write note on contaminant.
12) Food borne infection.
13) Define pasteurization and its importance.
14) Define food spoilage and its importance in food safety.
15) Write note on FIFO.
16) Write note on steps involved in steps to food safety.
17) Serving safe food.
18) Write note on cross-contamination.

P.T.O.

PART – C

(3×4=12)

III. Answer **any 3** of the following :

19) Write note on advantages linked with the use of food supply chain waste as a renewable feedstock.

20) Write note on kitchen equipment every restaurant in food safety.

21) Write note on methods of waste disposal.

22) Write note on important initiatives by FSSAI.

PART – D

(5×6=30)

IV. Answer **any 6** of the following :

23) Explain in detail about pest control methods.

24) What is danger zone and explain in detail in food safety ?

25) Describe the food product contact surfaces and sanitary design in food safety.

26) Explain in detail dishwashing procedure in food safety.

27) Define cleaning agents in food safety and write notes on types of cleaning agents.

28) Write note on food display and explain display protected from contamination.

29) Write note on storage techniques and its importance.

30) What is personal hygiene ? and its importance in food safety.

DCCN – 102

First Semester B.Sc. Degree Examination, May/June 2022
(NEP Scheme)
CLINICAL NUTRITION
Essentials of Macronutrients

Time : 2½ Hours Max. Marks : 60

PART – A

Answer the following : (6×1=6)

1. Define Glycaemic Index.
2. Glucose + Fructose : Sucrose :: Glucose + Lactose _____
3. Why carbohydrates are called energy food when even lipids also give more energy than carbohydrates ?
4. Mention on Trans fatty acids.
5. What are the Food sources of proteins ?
6. Give a short note on Dietary fibre.

PART – B

Answer the following : (6×2=12)

7. Write a brief note on visible and invisible fat.
8. Specify on the structure of amino acid.
9. Write a note on composition of protein.
10. What is 'Micelle' ? State the significance.
11. Derive the food sources of Carbohydrates and Dietary fibre.
12. Classify the Carbohydrates.

P.T.O.

PART – C

Answer **any 3** of the following : **(3×4=12)**

13. List out the functions of protein.
14. Write on nutritional significance of the carbohydrate.
15. Describe essential and non-essential amino acids. List out the essential amino acids.
16. Illustrate the classification of lipids.

PART – D

Answer **any 6** of the following : **(6×5=30)**

17. Demonstrate the steps of Glycolysis.
18. Explain how the proteins breakdown to amino acids in the body.
19. Give detailed explanation on classification of proteins.
20. Describe the steps involved in the digestion process of carbohydrates with neat labelled diagram.
21. What are the assessment methods of protein quality ? Explain each in detail.
22. Characterize and differentiate Macronutrients in detail.
23. Point out the role of omega-3 and omega-6 fatty acids. Mention the Food sources.
24. Comment on the following :
    a) Resistant Starch
    b) Absorption of lipids
    c) Functions of carbohydrates.

DCCN – 101

First Semester B.Sc. Degree Examination, May/June 2022
(NEP Scheme)
CLINICAL NUTRITION
Fundamentals of Nutrition

Time : 2½ Hours | Max. Marks : 60

PART – A

Answer **any 6** of the following. **(6×1=6)**

1. BMI less than 17 : Under weight : : BMI more than 25 :
2. Define optimum nutrition.
3. Describe energy and mention the units of energy.
4. Give two examples for food exchange.
5. Classify the methods of cooking.
6. Specify any 2 advantages of Balanced diet.
7. What is thermic effect of food ?
8. Only vital functions : BMR : : Vital functions + light work :

PART – B

Answer **any 6** of the following. **(6×2=12)**

9. Mention the energy values of macronutrients in food.
10. Write a note on the following :
    a) Kilocalorie
    b) Joule.
11. Draw neat labelled diagram of food pyramid.
12. Elucidate relation between body weight and physical activity.
13. List out the factors affecting BMR.
14. What are the methods of enhancing nutritive value ?
15. Highlight the inter-relationship between food, nutrition and health.
16. Calculate BMI of person 'A'. Height - 5 feet and body weight - 50 kg.

P.T.O.

PART – C

Answer **any 3** of the following. **(3×4=12)**

17. Signify the importance of Harris Benedict equation. Note down the formulas of Men and Women.
18. Explain the principles of cooking. Refer the effects of cooking on nutritive value.
19. Brief note on food group system and diet diversity.
20. Disclose the Physiological, Psychological and Social factors affecting food intake.

PART – D

Answer **any 6** of the following **(5×6=30)**

21. Illustrate the steps of preliminary preparation of food.
22. Demonstrate the direct and indirect methods of Nutritional Assessment.
23. Derive the advantages and disadvantages of cooking methods.
24. Clarify on therapeutic nutrition and malnutrition. Put down the types of malnutrition.
25. State on daily value and nutrient density with examples.
26. Give short note on RMR. Differentiate between BMR and RMR.
27. How do you assess the 24 hr dietary recall ? Construct one 24 hr recall interview chart.
28. Comment on the following :
    a) RDA
    b) PAL
    c) FFQ
    d) BMI
    e) SDA.

OEPY – 101

I Semester All UG Courses Examination, May/June 2022
(Semester Scheme) (NEP)
PSYCHOLOGY (Open Elective)
Psychology of Health and Wellbeing

Time : 2½ Hours

Max. Marks : 60

Instructions : 1) ***All three*** *Sections are* ***compulsory***.
2) *Answer must be written either in* ***English*** *or* ***Kannada***.

SECTION – A/ವಿಭಾಗ - ಎ

I. Answer **any 6** of the following. **Each** answer carries **two** marks. **(6×2=12)**
ಯಾವುದಾದರೂ **ಆರು** ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸಿ. **ಪ್ರತಿ** ಉತ್ತರಕ್ಕೂ **ಎರಡು** ಅಂಕಗಳು.

1) Define illness.
ಅನಾರೋಗ್ಯವನ್ನು ವ್ಯಾಖ್ಯಾನಿಸಿ.

2) What are stressors ?
ಪ್ರತಿಬಲನಕಾರಕಗಳು ಎಂದರೇನು ?

3) What is Eustress ?
ಹಿತಕರ ಪ್ರತಿಬಲನ ಎಂದರೇನು ?

4) What is yoga ?
ಯೋಗ ಎಂದರೇನು ?

5) Mention any 4 asanas of yoga.
ಯೋಗದ ಯಾವುದಾದರೂ 4 ಆಸನಗಳನ್ನು ಹೆಸರಿಸಿ.

6) What are health compromising behaviours ?
ಆರೋಗ್ಯ ರಾಜಿ ಮಾಡಿಕೊಳ್ಳುವ ವರ್ತನೆಗಳು ಎಂದರೇನು ?

7) Define weakness.
ದುರ್ಬಲತೆಯನ್ನು ವ್ಯಾಖ್ಯಾನಿಸಿ.

8) What is optimism ?
ಆಶಾವಾದ ಎಂದರೇನು ?

9) What is hope ?
ಭರವಸೆ ಎಂದರೇನು ?

P.T.O.

SECTION – B/ವಿಭಾಗ - ಬಿ

II. Answer **any 4** of the following questions. **Each** answer carries **six** marks. **(6×4=24)**
ಯಾವುದಾದರೂ **ನಾಲ್ಕು** ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸಿ. **ಪ್ರತಿ** ಉತ್ತರಕ್ಕೂ **ಆರು** ಅಂಕಗಳು.

1) Write a short note on health and well-being.
ಆರೋಗ್ಯ ಮತ್ತು ಸುಸ್ಥಿಯ ಕುರಿತು ಲಘು ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ.

2) Explain the nature and sources of stress.
ಪ್ರತಿಬಲನದ ಸ್ವರೂಪ ಹಾಗೂ ಮೂಲಗಳನ್ನು ವಿವರಿಸಿ.

3) Briefly explain about holistic health.
ಸಮಗ್ರ ಆರೋಗ್ಯದ ಕುರಿತು ಸಂಕ್ಷಿಪ್ತವಾಗಿ ವಿವರಿಸಿ.

4) Explain exercise as a health promoting behaviour.
ಆರೋಗ್ಯ ವರ್ಧನೆಯ ವರ್ತನೆಯಾಗಿ ವ್ಯಾಯಾಮವನ್ನು ವಿವರಿಸಿ.

5) Write a note on strength.
ಶಕ್ತಿ (ಬಲ) ಕುರಿತು ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ.

6) Write a note on coping.
ನಿಭಾವಣೆ ಕುರಿತು ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ.

SECTION – C/ವಿಭಾಗ - ಸಿ

III. Answer **any three** of the following questions. **Each** answer carries **eight** marks. **(3×8=24)**
ಯಾವುದಾದರೂ **ಮೂರು** ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸಿ. **ಪ್ರತಿ** ಉತ್ತರಕ್ಕೂ **ಎಂಟು** ಅಂಕಗಳು.

1) Explain medical and bio-psychosocial model on health and illness.
ಆರೋಗ್ಯ ಮತ್ತು ಅನಾರೋಗ್ಯದ ವೈದ್ಯಕೀಯ ಹಾಗೂ ಜೀವಮನೋಸಾಮಾಜಿಕ ಮಾದರಿಯನ್ನು ವಿವರಿಸಿ.

2) Explain meditation and nutrition as health enhancing behaviour.
ಆರೋಗ್ಯ ವರ್ಧನೆಯ ವರ್ತನೆಯಾಗಿ ಪೌಷ್ಟಿಕತೆ ಮತ್ತು ಧ್ಯಾನವನ್ನು ವಿವರಿಸಿ.

3) Explain health protective behaviours.
ಆರೋಗ್ಯ ರಕ್ಷಕ ವರ್ತನೆಗಳನ್ನು ವಿವರಿಸಿ.

4) Explain how to identify weakness and to overcome from it.
ದುರ್ಬಲತೆಯನ್ನು ಗುರುತಿಸುವುದು ಮತ್ತು ಅದರಿಂದ ಹೊರಬರುವುದು ಹೇಗೆಂಬುದನ್ನು ವಿವರಿಸಿ.

5) Explain the effects of stress on physical and mental health.
ದೈಹಿಕ ಹಾಗೂ ಮಾನಸಿಕ ಆರೋಗ್ಯದ ಮೇಲೆ ಪ್ರತಿಬಲನದ ಪ್ರಭಾವವನ್ನು ವಿವರಿಸಿ.

DCPH – 101

I Semester B.Sc. Examination, May/June 2022
(NEP Scheme)
PHYSICS
Mechanics and Properties of Matter

Time : 2½ Hours

Max. Marks : 60

Instruction : *Answer **all** the Parts. **All** Parts are **compulsory**.*

PART – A

Answer **any six** questions. **Each** question carries **one** mark. **(6×1=6)**

1. $ML^{-1}T^{-2}$ is the dimensional formula for which physical quantity ?
2. If the velocity of a body is doubled, then its kinetic energy becomes how much ?
3. On which principle the Rocket Works ?
4. Why does moon have no atmosphere ?
5. Which material has the maximum Young's modulus ?
6. What is the work done in deforming a body ?
7. At the boiling point of water, what is its surface tension ?
8. Which rain drop fall faster, big ones or small ones ?

PART – B

Answer **any six** questions. **Each** question carries **two** marks. **(6×2=12)**

9. Mention any two uses of dimensional analysis.
10. What is twin paradox ?
11. Where is the centre of mass of the Sun-Earth System located ? Explain.

P.T.O.

12. State Newton's law of Gravitation.

13. Poisson's ratio cannot be negative. Justify.

14. Steel is more elastic than Rubber. Explain.

15. Why needle floats on water surface ? Explain.

16. Define Co-efficient of Viscosity.

PART – C

Answer **any three** questions. **Each** question carries **four** marks. **(3×4=12)**

17. A body of mass 5 kg initially at rest is subjected to a force of 20 N. What is the kinetic energy required by the body at the end of 10 s ?

18. A flywheel of mass 25 kg has a radius of 0.2 m. It is making 240 rpm. Calculate moment of inertia and energy.

19. A wine of 1 mm diameter and 1 m long fixed at one end is stretched by 0.01 mm when a load of 10 kg is attached to its free end. Calculate the Young's modulus of elasticity.

20. A needle 5 cm long can just rest on the surface of water without wetting. What is its weight ? Surface tension of water = 0.07 N/m.

PART – D

Answer **any five** questions. **Each** question carries **six** marks. **(5×6=30)**

21. a) Define linear momentum.

    b) State and explain the law of conservation of linear momentum. Give two examples. **(1+5)**

22. a) What is time dilation ?

    b) Obtain the expression for time dilation on the basis of Lorentz transformation equation. (1+5)

23. a) Define angular velocity.

    b) Derive the relation for centre of mass of the system of particles. (1+5)

24. Derive an expression for moment of inertia of solid cylinder about an axis passing through its centre and perpendicular to its axis of cylindrical symmetry. 6

25. Derive an expression for couple per unit twist of the material of the wire. 6

26. Define :

    i) Neutral axis

    ii) Neutral surface

    iii) Bending moment. 6

27. Describe the method of determining the surface tension of a liquid by capillary rise. Deduce the formula. 6

28. Derive Poiseuille's formula for the rate of flow of liquid through a capillary tube. 6

DCCA – 102

I Semester B.C.A. Degree Examination, May/June 2022
(NEP Scheme)
COMPUTER APPLICATION
CAC02 : Programming in C

Time : 2½ Hours | Max. Marks : 60

***Instruction** : Answer **all** the Sections.*

SECTION – A

I. Answer **any 6** questions, **each** question carries **2** marks. **(6×2=12)**

1) Mention any two features of C.
2) What is constants ? Give example.
3) What are increment and decrement operators ?
4) Differentiate between break and continue.
5) What is a two dimensional array ?
6) What is string ? Mention any two string handling functions.
7) What is pointer ? How it is declared ?
8) What is a function prototype ?
9) What is union ? Give its syntax.

SECTION – B

II. Answer **any 4** questions, **each** question carries **6** marks. **(4×6=24)**

10) Explain formatted input/output function in C.
11) Explain the fundamental data types supported by C.
12) Explain switch statement with syntax and example.
13) What is an array ? Explain memory representation of one dimensional array with example.
14) What are advantages and disadvantages of using pointers ?
15) Explain components of user defined functions.

P.T.O.

DCCA – 102

SECTION – C

III. Answer **any 3** questions, **each** question carries **8** marks. (3×8=24)

16) a) Explain the structure of C Program with example. 6

b) Mention character set in C. 2

17) Discuss any 4 types of operators supported by C language. 8

18) Explain any two looping statements with example. 8

19) Write a C program to perform addition and subtraction of two matrices. 8

20) a) Write a note on array of structure. 4

b) Difference between structures and unions. 4

DCEL – 101

I Semester B.Sc. Examination, May/June 2022
(NEP Scheme)
ELECTRONICS (DSC)
Electronic Devices and Circuits

Time : 2½ Hours | Max. Marks : 60

Instructions : 1) *Answer **all** the questions from Part – **A**, **any four** questions from Part – **B** and **any four** questions from Part – **C**.*
2) *It is required to answer all the questions of Part – A in **any one** page, answering the **same** questions multiple times will **not** be considered for evaluation.*

PART – A

1. Answer **all** the sub-divisions : **(12×1=12)**

I. We need a resistor of value 47k with ± 5% tolerance. The sequence of the color band on this resistor should be

a) yellow, violet, yellow and gold b) yellow, violet, orange and silver
c) yellow, violet, orange and gold d) yellow, violet, brown and gold

II. In a step up transformer, the number of turns in the secondary coil is

a) less than primary coil turns b) more than primary coil turns
c) equal to primary coil turns d) none of the above

III. Thevenin's equivalent circuit consists of a

a) constant voltage source with a resistance in parallel
b) constant voltage source with a resistance in series
c) a current source with an voltage source
d) current source in series with a resistance

IV. According to Kirchhoff's current law, the algebraic sum of the currents meeting a point is always

a) zero b) positive
c) negative d) equal to unity

P.T.O.

V. In order to obtain a maximum power from the terminals of a network, the load resistance should be

a) greater than the circuit resistance

b) equal to the circuit resistance

c) less than the circuit resistance

d) double the circuit resistance

VI. Theoretical value of ripple factor for a half wave rectifier is

a) 0.482 b) 0.812

c) 1.11 d) 1.21

VII. Voltage regulator is a circuit which

a) converts the ac voltage to dc voltage

b) smoothens the variations in dc output voltage

c) maintains a constant dc output voltage

d) Converts dc to ac

VIII. In a Bipolar junction transistor

a) emitter is moderate in size and heavily doped

b) emitter is larger in size and heavily doped

c) emitter is smaller in size and heavily doped

d) emitter is smaller in size and lightly doped

IX. The leakage current ICBO flows in

a) the emitter, base and collector leads

b) the emitter and base leads

c) the emitter and collector leads

d) the base and collector leads

X. 4 bit representation in sign magnitude convention for negative number, + 7 is

a) 0111 b) 1111

c) 1101 d) 1010

XI. The next consecutive number in the array of BCD numbers 0111, 1000, 1001 is

a) 1111 0001 b) 1011 0001

c) 1110 d) 0001 0000

XII. _____ are universal gates.

a) NOT b) NAND and NOR

c) X-OR and X-NOR d) NOT, AND and OR

PART – B

Answer **any four** questions : **(4×7=28)**

2. a) Explain the method of conversion of a voltage source into a current source.

   b) Draw the circuit diagram of series RC circuit. Write the expressions for charging and discharging of the circuit, show it graphically.

3. a) State maximum power transfer theorem.

   b) State Norton's theorem, with suitable circuit diagrams. Explain the steps to Nortonise a resistive network.

4. Draw the circuit diagram of full wave bridge rectifier and explain its working. Draw the input and output waveforms. Mention its advantages and disadvantages.

5. a) Define Thermal runaway and stability factor. **(2+5)**

   b) With necessary circuit diagram, explain the working of small signal CE amplifier.

6. a) Explain with an example, the conversion of a decimal number Hexadecimal into its equivalent.

   b) Write the excess-3 code equivalents for all the decimal digits.

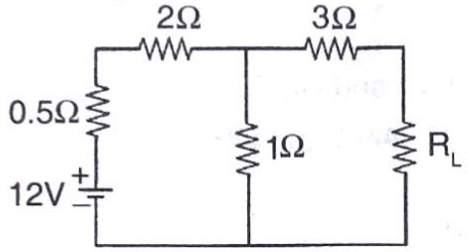
7. a) State and prove De-Morgan's theorem.

   b) Realize AND and OR gates using NAND gate.

PART – C

Answer **any four** questions : **(4×5=20)**

8. Find the value of R_L at which maximum power is transferred to the load in the following circuit. Also, find the maximum power transferred.



9. Calculate efficiency and PIV of a half wave rectifier circuit with an input voltage of 220 V rms and load R_L of 100 Ω. Given r_d – 5Ω and turns ratio of the transformer is 10 : 1.

10. Following observations have been recorded in an experiment to plot the characteristics of an NPN transistor in CE mode. Determine, r_i, r_o and current amplification factor β_{ac}.

V_{BE}(V)	I_B(mA)	V_{CE}(V)	I_C(mA)
0.65	75	6	5
0.70	100	6	10
0.70	100	12	10.5

11. a) Convert the following binary numbers into Hexadecimal :
    i) $110101001_{(2)}$ ii) $1100111_{(2)}$.
    b) Convert the following decimal numbers into binary :
    i) $67_{(10)}$ ii) $78.60_{(10)}$.

12. a) Perform the subtraction of the following binary numbers using 2's complement method.
    i) $11010_{(2)} - 10000_{(2)}$ ii) $111_{(2)} - 1001_{(2)}$.
    b) Add $A2_{(16)}$ with $3D_{(16)}$.

13. Simplify :
    i) $(\overline{A}+C)\cdot(B+\overline{D})$ ii) Convert $(A6C)_{16}$ to octal.

AECC – 2.2

I Semester B.Sc./B.C.A. Examination, May/June 2022
(NEP)
Paper – 1 : GENERIC ENGLISH (L2)

Time : 2½ Hours | Max. Marks : 60

Instructions : *1) Answer **all** questions.*
*2) Mention question numbers **correctly**.*

SECTION – A

I. Read the passage and answer the following questions : **5**

The victory of the small Greek democracy of Athens over the mighty Persian Empire in 490 B.C. is one of the most famous events in history. Darius, king of the Persian Empire, was furious because Athens had interceded for the other Greek city-states in revolt against Persian domination. In anger the king sent an enormous army to defeat Athens. He thought it would take drastic steps to pacify the rebellious part of the empire.

Persia was ruled by one man. In Athens, however, all citizens helped to rule. Ennobled by this participation, Athenians were prepared to die for their city-state. Perhaps this was the secret of the remarkable victory at Marathon, which freed them from Persian rule. On their way to Marathon, the Persians tried to fool some Greek city-states by claiming to have come in peace. The frightened citizens of Delos refused to believe this. Not wanting to abet the conquest of Greece, they fled from their city and did not return until the Persians had left. They were wise, for the Persians next conquered the city of Eritrea and captured its people.

Tiny Athens stood alone against Persia. The Athenian people went to their sanctuaries. There they prayed for deliverance. They asked their gods to expedite their victory. The Athenians refurbished their weapons and moved to the plain of Marathon, where their little band would meet the Persians. At the last moment, soldiers from Plataea reinforced the Athenian troops. The Athenian army attacked, and Greek citizens fought bravely. The power of the mighty Persians was offset by the love that the Athenians had for their city. Athenians defeated the Persians in both archery and hand combat. Greek soldiers seized Persian ships and burned them, and the Persians fled in terror. Herodotus, a famous historian, reports that 6,400 Persians died, compared to only 192 Athenians.

P.T.O.

1) When was the victory of the small Greek democracy of Athens over the mighty Persian Empire ?

2) Why did Darius take drastic steps ?

3) What did the Athenian pray for in the sanctuaries ?

4) Who is Herodotus ?

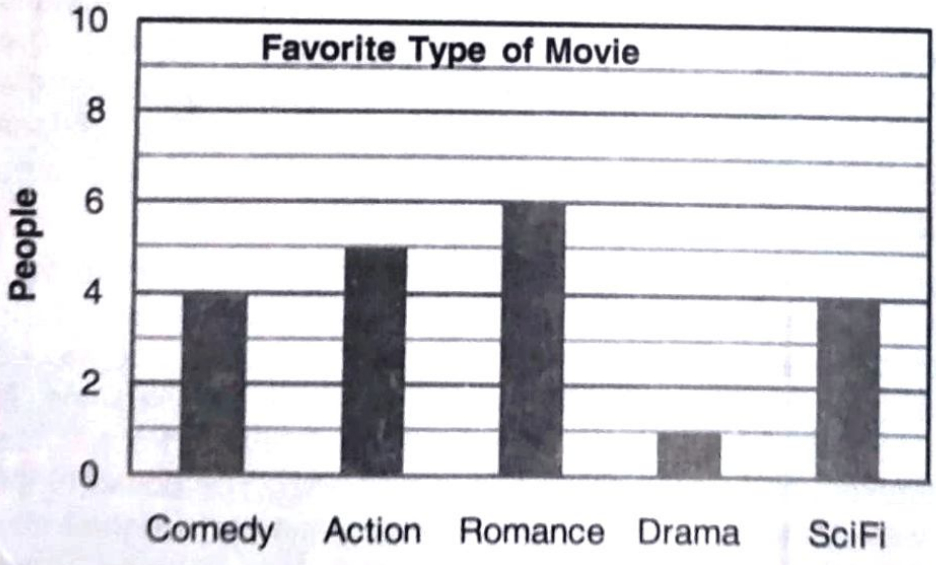
5) What motivated the Athenians to attack the Persians ?

II. Do as directed :

1) Arrange the following in MLA format. **2**
Title – Nampally Road
Author – Meena Alexander
Place – New Delhi
Year – 1992

2) Create a brochure about your college cultural fest, events and competitions. **3**

III. Read the graph and write a paragraph in about **100-150** words : **5**



IV. Answer **any five** of the following questions : **5**

1) What is comprehensive listening ?

2) Write any two differences between listening and hearing.

3) Mention the four language skills.

4) What is deep listening ?

5) Which are the two basic ways of communication ?

6) Critical listening requires listener to _____ , _____ and _____ on what he hears.

7) Describe the two types of listening.

V. Answer the following questions :

1) Define active listening and write any one objective of active listening. 2

2) Explain any 4 verbal signs of active listening. 2

3) What are the non verbal signs of active listening ? 1

VI. Do as directed :

1) Introduce your family members to your friend. 2

2) Fill in the blanks : 2

Prashanth: Hello sir, may I know on which platform the train to Delhi will arrive ?

Railway help desk: _____.

Prashanth : _____.

Railway help desk: The train will reach 40 minutes late today.

3) Write a line of request to the receptionist of a Hotel about the availability of room. 1

VII. Answer **any one** of the following questions : 3

Write instructions to make orange juice with the ingredients given below :

a) Orange

b) Water

c) Sugar

d) Ice cubes

OR

State the basic steps you will follow to draw money from an ATM.

VIII. Do as directed :

1) Add suitable question tag to the following : 2
   a) She has done this marvellous work.
   b) You will vote for me.
2) Frame a-Wh question to get the underlined word/phrase as answer : 2
   a) River Nile is the longest river in the world.
   b) We come to College at 9 a.m. every day.
3) Choose the correct form of verb and fill in the blanks : 1

   The student _____ (do/does) the projects excellently.

IX. Choose appropriate linkers and fill in the blanks : 2

a) _____ it was raining, we went out for a drive.

b) She is excellent in singing _____ in dancing.

(as well as, because, since, although)

SECTION – B
(Coursework)

X. Answer **any 5** of the following questions in **two** or **three** sentences : **(2×5=10)**

1) What does the poet demolish in the poem, 'I shall go Back in The New Year' ?
2) Where does the poet wish to go in 'I shall go Back in The New Year' ?
3) What are Aloo's first impressions of London in 'Leaving' ?
4) How was Kalam's teacher Shivasubhramanya Iyer different from others ?
5) When did Kalam confront the uncontrollable energy of nature ?
6) Why was the man afraid to come down from the tree in the lesson, 'The Wolf' ?
7) When is a woman insulted by the husband and the mother-in-law ?

XI. Answer **any two** of the following questions in a paragraph : **(5×2=10)**

1) 'I Shall Go Back in The New Year' expresses the speaker's desire to go back from civilization. Substantiate.
2) The story 'Leaving' dwells on family relations and kinship. Elaborate.
3) Comment on the harmony in Rameshwaram as told by Abdul Kalam.
4) How does the author react to gaining freedom ?

AECC 7.2

First Semester B.Sc./B.Sc.(FAD) Examination, May/June 2022
(NEP Scheme)
TAMIL LANGUAGE (Part – I) (Paper – I)

Time : 2½ Hours | Max. Marks : 60

SECTION – A

I. அனைத்து வினாக்களுக்கும் சரியான விடையைத் தேர்ந்தெடுத்து எழுதுக. (5×1=5)

1) ''மதுரைக் காஞ்சி'' என்னும் நூலின் ஆசிரியர்
   1) கணியன் பூங்குன்றனார் 2) கபிலர்
   3) மாங்குடி மருதனார் 4) இளங்கோவடிகள்

2) அகநானூறு என்னும் நூலைத் தொகுத்தவர்
   1) கபிலர் 2) உருத்திர சன்மனார்
   3) விளம்பி நாகனார் 4) இளங்கோவடிகள்

3) தமிழின் உயிர்மெய் எழுத்துகள்
   1) 247 2) 30
   3) 12 4) 216

4) கல்லாரே ஆயினும் செல்வர் வாய்ச் சொல் செல்லும் என்று கூறும் நூல்
   1) மணிமேகலை 2) நாலடியார்
   3) அகநானூறு 4) நன்னூல்

5) மகரக்குறுக்கத்தைக் கண்டறிக
   1) மருண்டம் 2) மலர்
   3) மங்கலம் 4) ஐவர்

II. எவையேனும் ஐந்திற்கு இடம் சுட்டிப் பொருள் விளக்கம் தருக. (5×3=15)

1) ஒங்கித் தோன்றும் உயர் வரை
   வான் தோய் வெற்பன் வந்தமாறே

2) கடுங் கதிர் திருகிய வேய் பயில் பிறங்கல்

P.T.O.

3) பனி வார் சிமையக் கானம் போகி
அக நாடு புக்கு அவர் அருப்பம் வெளவி

4) வாடாப் பூவின், இமையா நாட்டத்து
நாற்ற உணவின் உருகெழு பெரியோர்

5) நல்லம் யாம் என்னும் நடுவு நிலைமையால்
கல்வி அழகே அழகு

6) மனப்பாடம் செய்து தேர்வு எழுதும்
முறையை இயந்திரம் கூடச் செய்யும்
என்றார்

7) யார் பிச்சையிடுவது
நிலங்களே திருவோடு ஏந்தினால்

8) சமுதாய உறவின் உயர்நிலை ஒரு சமூகத்திற்கு
இயற்கையோடு உள்ள உறவாகும்

SECTION – B

III. எவையேனும் ஐந்திற்குச் சுருக்கமான விடை தருக. **(5×4=20)**

1) முதல் எழுத்துகளைச் சான்றுடன் விளக்குக.

2) சொல்லிடை அளபெடையினைச் சான்றுடன் கூறுக.

3) குற்றியலுகரத்தின் வகைகளைக் குறிப்பிடுக.

4) வினா எழுத்துகளைச் சான்றுடன் விளக்குக.

5) மதுரையின் செயற்கைச் செழிப்பு நிலையினை விளக்குக.

6) மெய்ம்மை குறித்து நாலடியார் பாடல் கூறும் கருத்துகள் யாவை ?

7) பெண்ணியம் சொல் விளக்கம் தருக.

8) பனையோலை முறையினை முனைவர் வே. நெடுஞ்செழியன் வழிநின்று விளக்குக.

SECTION – C

IV. எவையேனும் நான்கிற்கு விடைத் தருக. (4×5=20)

1) தோழி, தலைமகளைப் பருவம் காட்டி வற்புறுத்திச் சொல்லியவற்றை குறுங்குடி மருதனார் வழிநின்று விளக்குக.

2) மதுரை மாநகரின் அமைப்பும், காட்சிகளும் குறித்து எழுதுக.

3) அறன் வலியுறுத்தல் குறித்து நாலடியார் பாடல் கூறும் கருத்துகளைத் தொகுத்து வரைக.

4) தமிழ் இலக்கியத்தில் மனிதநேயத் தன்மை குறித்து கருத்துகளை இரா. தெய்வம் வழிநின்று விளக்குக.

5) மேலை நாட்டுப் பெண்ணியம் குறித்து எழுதுக.

6) சுவடிப்பதிப்பு முன்னோடிகள் குறித்து எழுதுக.

AECC – 8.3

I Semester B.Sc./B.Sc.(FAD)/B.Sc.(Forensic) Examination, May/June 2022
(NEP)
TELUGU
Telugu Language – I
Classical Poetry, Prose and Grammar

Time : 2½ Hours | Max. Marks : 60

***Instruction** : **All** questions are **compulsory**.*

I. ఈ క్రింది ప్రశ్నలకు **సరియైన** సమాధానాలను రాయండి. **(10×1=10)**

1) మహాభారతంలోని ఏ పర్వము నుండి హితోక్తి పాఠ్యభాగం గ్రహించబడింది.

A) ఆది పర్వం B) విరాట పర్వం

C) సభా పర్వం D) ఉద్యోగ పర్వం

2) నన్నయ ఎవరియాస్థానమున నుండెను ?

A) మనుమసిద్ధి B) రాజరాజ నరేంద్రుడు

C) ప్రోలయ వేమారెడ్డి D) శ్రీకృష్ణదేవరాయలు

3) శ్రీనాథుడు ఏ కాలమునకు చెందినవాడు ?

A) 1180-1470 B) 1080-1140

C) 1380-1470 D) 1500-1600

4) పదకవితా పితామహుడు అనే బిరుదు

A) అన్నమయ్య B) సారంగపాణి

C) క్షేత్రయ్య D) త్యాగయ్య

5) క్షేత్రయ్య జన్మస్థలం ఏది ?

A) కృష్ణా జిల్లా మొవ్వగ్రామం B) తంజావూరులోని తిరువారు

C) రాయలసీమ నివాసి D) నేలకొండపల్లి

6) ఏ, ఓ, ఆర్ లు

A) త్రికములు B) సరళములు

C) గుణములు D) దీర్ఘములు

P.T.O.

7) కిన్, కున్, యొక్క, లోన్, లోపలన్, అనేవి ఏమిటి ?
   A) ద్వంద్వము B) సప్తమి విభక్తి
   C) షష్ఠి విభక్తి D) బహువ్రీహి సమాసం

8) శ్రీనాథుడు బిరుదు
   A) ప్రబంద పరమేశ్వరుడు B) కవిసార్వభౌముడు
   C) ఆంధ్రభోజుడు D) ముక్కు తిమ్మన

9) నిర్వచనోత్తర రామాయణం ఎవరిది ?
   A) నన్నయ B) ఎఱన
   C) తిక్కన D) శ్రీనాథుడు

10) గుణనిధి రచయిత
   A) ఎఱన B) వేమన
   C) శ్రీనాథుడు D) పోతన

II. ఈ క్రింది వాటిలో **మూడింటికి** సందర్భసహిత వ్యాఖ్యలు రాయండి. **(3×4=12)**

1) ముల్లనను గంథి యగుచు మునివరుమీఁదన్.
2) హానన యెందుండి వచ్చి తండులకు వడిన్.
3) బులు విన, ధృతరాష్ట్ర భూవిభున కిట్లనియెన్.
4) గీడుమేలుఁదుది నీయం దొందెడుం.
5) భవ దృలంబులై యందఱు గూడుటొప్పదె.
6) దీపము ప్రభవించినట్లు తేజం బెసఁగన్.

III. ఈ క్రింది వాటిలో **మూడింటికి** లఘు ప్రశ్నలకు సమాధానములు వ్రాయునది. **(3×6=18)**

1) దుష్యంతుడు శకుంతలను నిరాకరించుట.
2) గుణనిధి.
3) సంకీర్తనలు.
4) త్రికసంధి సోదాహరణంగా వివరించండి.
5) ద్వంద్వ సమాసాన్ని వివరించండి.
6) క్షేత్రయ్య రచనలు.

IV. ఈ క్రింది ప్రశ్నలలో **రెండింటికి** సంక్షిప్తంగా సమాధానాలు రాయండి. **(2×10=20)**

1) పారంగపాణి పదాలు తెల్పండి.
2) హితోక్తి కథాంశాన్ని వివరించండి.
3) అన్నమయ్య పదాలను పరిచయం చేయండి.
4) నన్నయ కవితా రీతులు తెలపండి.

AECC – 9.2

I Semester B.Sc./B.Sc.(FAD) Examination, May/June 2022
(NEP Scheme)
MALAYALAM LANGUAGE (Paper – I) (Part – I)

Time : 2½ Hours | Max. Marks : 60

SECTION – A

I. ബ്രാക്കറ്റിൽ നിന്നും **ശരിയായ** ഉത്തരം തെരഞ്ഞെടുത്തെഴുതുക. **(5×1=5)**

1) കല്ല്യാണസൗഗന്ധികം ഏത് പ്രസ്ഥാനത്തിൽ ഉൾപ്പെടുന്നു ?
   1) നാടക പ്രസ്ഥാനം 2) തുള്ളൽ
   3) ചാക്യാർകൂത്ത് 4) കഥകളി

2) ദാവീദിന്റെ സൈന്യാധിപൻ ആര് ?
   1) യോവാബ് 2) അമാസ
   3) നാഥാൻ 4) ഊറിയ

3) 'ബോധിവൃക്ഷത്തിന്റെ ഇലകൾ' എഴുതിയതാര് ?
   1) ഗുപ്തൻ നായർ 2) പി. എൻ. ദാസ്
   3) ജോസഫ് മുണ്ടശ്ശേരി 4) എം. പി. പോൾ

4) "കല്ല്യാണസൗഗന്ധികം" എഴുതിയതാര് ?
   1) എഴുത്തച്ഛൻ 2) കുഞ്ചൻനമ്പ്യാർ
   3) ചെറുശ്ശേരി 4) കുമാരനാശാൻ

5) കല്ല്യാണസൗഗന്ധികം അന്വേഷിച്ച് പോകുന്നതാര് ?
   1) ഹനുമാൻ 2) ഭീമൻ
   3) അർജ്ജുനൻ 4) നകുലൻ

II. ഏതെങ്കിലും **അഞ്ചെണ്ണ**ത്തിന് ഉത്തരമെഴുതുക. **(5×3=15)**

1) "മന്ദാകിനിജലം കൊണ്ടുവന്നാദരാൽ
   മന്നിടം തന്നിൽ പരത്തി മഹാരഥൻ"

2) "ചപല സ്ത്രീകളെപ്പോലെ
   കഥിക്കുന്നതെന്തേടോ ബാലേ"

3) "വണ്ടുകളെല്ലാം മുരണ്ടു കൂതൂഹലം
   പൂണ്ടുവനങ്ങളിൽ പണ്ടുള്ള പുഷ്പങ്ങൾ"

4) "കൊണ്ടു തകർത്തു തിമർത്തു ശമിപ്പതിൽ
   വേണ്ടും ബലം നിനക്കുണ്ടെന്നു നിർണ്ണയം."

P.T.O.

AECC – 9.2

5) ''നല്ലൊരു കീർത്തി ലഭിച്ച കഥാമൃതം
കില്ലു കൂടാതെ കഥിപ്പാൻ തുടർന്നവൻ''

6) ''പണ്ടെടോ നിൻകരംകൊണ്ടു ഹിഡിംബന്റെ
കണ്ടും പിടിച്ചാശു കണ്ടിച്ചെറിഞ്ഞതും''

7) ''കാട്ടാള രാജാനും കൂട്ടരുമൊക്കവേ
വേട്ടയ്ക്കു കോപ്പുകൾ കൂട്ടി പുറപ്പെട്ടു''

8) ''കൊറ്റിനില്ലാത്തവൻ കോപ്പു മോഹിക്കുമോ
വറ്റിനില്ലാത്തവൻ പാൽ കുടിച്ചീടുമോ''

SECTION – B

III. ഏതെങ്കിലും **അഞ്ചെണ്ണത്തിന്** ഉത്തരമെഴുതുക. **(5×4=20)**

1) വചനം എന്നാലെന്ത് ? ഉദാഹരണസഹിതം വിവരിക്കുക.

2) ഹനുമാൻ എന്ന കഥാപാത്രത്തെ വിവരിക്കുക.

3) ഗുർജിഫ് തിയ്യറി എന്നാലെന്ത് ?

4) 'ബത്ശേബ'യ്ക്ക് നാടകത്തിലുള്ള പ്രാധാന്യമെന്ത് ?

5) ലിംഗത്തിന് വ്യാകരണത്തിലുള്ള പ്രാധാന്യമെന്ത് ? വിവിധ തരത്തിലുള്ള ലിംഗം – ഉദാഹരണ സഹിതം വിവരിക്കുക.

6) യോവാസ് പ്രവാചകൻ ആര് ? നാടകത്തിലെ സ്ഥാനമെന്ത് ?

7) സൗന്ദര്യം കാണാൻ കഴിയും അനുഭവിക്കാനാവില്ല –സന്ദർഭം, ആശയം വ്യക്തമാക്കുക.

8) ദാവീദ് ചെയ്ത തെറ്റ് – വിവരിക്കുക.

SECTION – C

IV. ഏതെങ്കിലും **നാലെണ്ണത്തിന്** ഉത്തരമെഴുതുക. **(4×5=20)**

1) 'ആ മനുഷ്യൻ നീ തന്നെ' ആസ്വാദനമെഴുതുക.

2) ധ്യാനത്തിന്റെ പ്രത്യേകതകൾ വിവരിക്കുക.

3) ഊറിയ്ക്ക് നാടകത്തിലുള്ള പ്രാധാന്യം.

4) 'ചന്ദ്രനു നേരെ ചൂണ്ടുന്ന വിരൽ' – എന്നതിലെ പരാമർശങ്ങൾ എന്തെല്ലാം ?

5) ഹനുമാന്റെ മാർഗ്ഗ നിരോധനത്തിന്റെ പ്രസക്തി വിവരിക്കുക.

6) ''യാഥാർത്ഥ്യത്തിലേക്കൊരു വാതിൽ'' – വിവരിക്കുക.

AECC – 4.2

I Semester B.Sc. Examination, May/June 2022
(NEP Scheme)
HINDI LANGUAGE
Paper – I : Kahani Aur Vyakaran/Sankshepan

Time : 2½ Hours | Max. Marks : 60

I. निम्नलिखित प्रश्नों के उत्तर **एक** शब्द या वाक्यांश में लिखिए। **(10×1=10)**

1) धन किसका ईंधन है ?

2) साधु के कितने बच्चे थे ?

3) आवश्यकताओं ने किसे बहुत शीघ्र चतुर बना दिया था ?

4) 'झाँकी' कहानी के लेखक कौन है ?

5) घोडे के लिए सरकारी रेट कितने रुपए थे ?

6) तीसरे दिन लेखक के कमरे से क्या गायब हो गया था ?

7) बाबू राधाकृष्ण की बेटी का नाम क्या था ?

8) सीताराम के कितने बच्चे है ?

9) मंजव्वा की बेटी का नाम क्या है ?

10) गोपाल नंबोदरी कौन है ?

II. किन्हीं **दो** के संदर्भ सहित व्याख्या कीजिए। **(2×7=14)**

1) ''महाराज यदि साधु-संतों की सेवा न की तो इस मनुष्य देह से क्या लाभ ही क्या ?''

2) ''बाबूजी नमस्ते आप कहिए तो खेल दिखाऊँ ?''

3) ''विवाह की बात तो पीछे होगी। क्या रूप-रंग बहुत खराब है ?''

III. 'पुनर्जन्म' कहानी का सारांश लिखकर उसकी विशेषताओं पर प्रकाश डालिए। **(1×16=16)**

अथवा

'माँ मुझे स्कूल जाना है' कहानी के आधार पर लक्ष्मी एवं हेडमास्टर का चरित्र-चित्रण कीजिए।

P.T.O.

IV. किसी **एक** पर टिप्पणी लिखिए। **(1×5=5)**

1) गौरी

2) द्वारकानाथ।

V. प्रयोजन मूलक हिन्दी–किन्हीं **दो** का उत्तर लिखिए। **(2×4=8)**

1) प्रतिवेदन की विशेषताएँ लिखिए।

2) आलेखन की विशेषताएँ लिखिए।

3) टिप्पण का उद्देश्य या महत्व को लिखिए।

VI. उचित शीर्षक देते हुए **एक तिहाई** शब्दों में संक्षेपण कीजिए। **(1×7=7)**

मनुष्य को अपने जीवन में कुछ न कुछ उद्देश्य रखना–चाहिए। उद्देश्य के बिना जीवन अर्थहीन हो जाता है। किसान सीधा–सादा सरल, पवित्र और मेहनती होता है। किसान को अपनी मेहनत करने के साथ–साथ देश की सेवा भी करनी है।

प्रत्येक मनुष्य के जीवन में उद्देश्यहीन मनुष्य बिना परिवार की नाव की तरह है। विभिन्न मनुष्य के विभिन्न उद्देश्य होते है। बहुत लोग धन कमाना चाहते है और धन कमाना ही उनका उद्देश्य बन जाता है। कुछ लोग केवल आनंद चाहते है तुम उन्हें योग्य और सफल किसान बनाने का उद्योग कर सकते है।

AECC – 1.2

ಪ್ರಥಮ ಸೆಮಿಸ್ಟರ್ ಬಿ.ಎಸ್ಸಿ. ಪದವಿ ಪರೀಕ್ಷೆ, ಮೇ/ಜೂನ್ 2022

(NEP Scheme)

ಕನ್ನಡ ಭಾಷೆ

Paper – 01 : ಕನ್ನಡ ವೈಭವ

Time : 2½ Hours | Max. Marks : 60

I. ಕೆಳಗಿನ ಯಾವುದಾದರೂ **ಆರಕ್ಕೆ** ಉತ್ತರಿಸಿ. **(6×2=12)**

1) ದೇವರ ರುಜು.

2) ದ. ರಾ. ಬೇಂದ್ರೆ.

3) ಗೂಡು ಕಟ್ಟಿರಿ ನಾಡ ಸೆರಗಿನಲಿ.

4) ಚನ್ನವೀರ ಕಣವಿ.

5) ನವೋದಯ ಸಾಹಿತ್ಯ.

6) ಹಸಿವು.

7) ಕಾಣಿಯ ಕುಟುಂಬ.

8) ಅಪ್ಪನ ಸಾವು.

9) ನಾಗೇಶ್ ಹೆಗಡೆ.

II. ಕೆಳಗಿನ ಯಾವುದಾದರೂ **ನಾಲ್ಕು** ಪ್ರಶ್ನೆಗಳಿಗೆ ಸಂಕ್ಷಿಪ್ತವಾಗಿ ಉತ್ತರಿಸಿ. **(4×6=24)**

10) 'ತುತ್ತಿನ ಚೀಲ' ಕವನದಲ್ಲಿ ಶ್ರೀಮಂತರ ಅಮಾನವೀಯ ವರ್ತನೆ.

11) ಕುಟುಂಬದ ಬೆಳಕು.

12) 'ಭಂಡರು' ಕವನದ ಸ್ತ್ರೀ-ಸಂವೇದನೆ.

13) ಮೇರಿಯ ವ್ಯಕ್ತಿತ್ವ.

14) ಲೇಖಕರ ನೆನಪುಗಳಿಂದ ಮೂಡಿಬರುವ ಅಪ್ಪನ ವ್ಯಕ್ತಿತ್ವ.

15) 'ಟೊಮೇಟೋ' ಕುರಿತು ಇದ್ದ ಅಪನಂಬಿಕೆಗಳು.

P.T.O.

III. ಕೆಳಗಿನ ಯಾವುದಾದರೂ **ಮೂರು** ಪ್ರಶ್ನೆಗಳಿಗೆ ವಿವರವಾಗಿ ಉತ್ತರಿಸಿ. **(3×8=24)**

16) ನಾಡಾಭಿಮಾನದ ಸ್ವರೂಪ 'ನಾಡಿನ ಏಕತೆ' ಕವಿತೆಯಲ್ಲಿ ಹೇಗೆ ಚಿತ್ರಿತವಾಗಿದೆ ? ವಿವರಿಸಿ.

17) 'ಕತ್ತೆ ಮತ್ತು ಧರ್ಮ' ಕವನದ ಆಶಯವನ್ನು ವಿವರಿಸಿ.

18) ಶಿಥಿಲಗೊಳ್ಳುತ್ತಿರುವ ಮಾನವ ಸಂಬಂಧಗಳು 'ಪ್ರಯಾಣ' ಕಥೆಯಲ್ಲಿ ಹೇಗೆ ಅನಾವರಣಗೊಂಡಿದೆ ? ವಿವರಿಸಿ.

19) ಕಾಣಿಯ ದುರಂತವು 'ಕೊನೆಯ ಗಿರಾಕಿ' ಕಥೆಯಲ್ಲಿ ಹೇಗೆ ಚಿತ್ರಿತವಾಗಿದೆ ? ವಿವರಿಸಿ.

20) 'ಟೊಮೇಟೋ' ಲೇಖನದ ವೈಶಿಷ್ಟ್ಯವನ್ನು ವಿವರಿಸಿ.

AECC – 6.2

I Semester B.Sc./B.C.A./B.H.M. Examination, May/June 2022
(NEP)
LANGUAGE SANSKRIT (Paper – I)
Buddha Charitam III Canto, Grammar and Comprehension

Time : 2½ Hours | Max. Marks : 60

Instructions : *i) Answer in **Sanskrit/Kannada/English**.*

*ii) Answer Question Nos. **I, V** and **VI** in **Sanskrit only**.*

I. समीचीनम् उत्तरं चित्वा लिखत । **(10×1=10)**

1) बुद्धचरितम् कीदृशं काव्यम् ?
   अ) लघुकाव्यम् आ) गीतकाव्यम् इ) महाकाव्यम् ई) नीतिकाव्यम्

2) सिद्धार्थस्य माता का ?
   अ) मायादेवी आ) छायादेवी इ) गङ्गादेवी ई) उषादेवी

3) कुमारः अन्तर्गृहे कः इव अवरुद्धः ?
   अ) श्वानः आ) मार्जालः इ) सिंहः ई) नागः

4) स्यन्दनं कति तुरङ्गैः युक्तमासीत् ?
   अ) त्रीभिः आ) चतुर्भिः इ) षड्भिः ई) पञ्चभिः

5) पौराः देवानुयायि किंवत् प्रणेमुः ?
   अ) चक्रवत् आ) पुष्पवत् इ) ध्वजवत् ई) पत्रवत्

6) महाकुलेभ्यः काः निसृताः ?
   अ) नार्यः आ) नद्यः इ) आज्ञाः ई) दासीजनाः

7) नरेण शिशुत्वे किं पीतम् ?
   अ) जलं आ) तक्रम् इ) पयः ई) विषम्

8) सुमहान् अनर्थः कः ?
   अ) धर्मः आ) अर्थः इ) कामः ई) रोगः

9) रूपस्य हन्त्री का ?
   अ) जरावस्था आ) बाल्यावस्था इ) युवावस्था ई) तरूणावस्था

10) मृतः कैः मनुष्यैः अनुगम्यमानः आसीत् ?
   अ) सन्तुष्टैः आ) तृप्तैः इ) दीनैः ई) हर्षितैः

P.T.O.

II. **एकस्य** प्रश्नस्य उत्तरं लिखत । **(1×10=10)**

ಯಾವುದಾದರೂ **ಒಂದು** ಪ್ರಶ್ನೆಯನ್ನು ಉತ್ತರಿಸಿರಿ.

Answer **any one** of the following.

1) अश्वघोषस्य देश-काल-कृती: अधिकृत्य प्रबन्धं लिखत ।

ಅಶ್ವಘೋಷನ ದೇಶ-ಕಾಲ-ಕೃತಿಗಳನ್ನು ಕುರಿತು ಪ್ರಬಂಧವನ್ನು ಬರೆಯಿರಿ.

Write an essay about the place-date and works of Ashwaghosha.

2) सिद्धार्थस्य संवेग कारणीभूता: घटना: विवृणुत ।

ಸಿದ್ಧಾರ್ಥನ ಸಂವೇಗಕ್ಕೆ ಕಾರಣವಾದ ಘಟನೆಗಳನ್ನು ವಿವರಿಸಿ.

Describe the incidents which caused anxiety in Siddhartha.

III. **त्रयाणां** श्लोकानाम् अनुवादं कृत्वा विवृणुत । **(3×4=12)**

ಯಾವುದಾದರೂ **ಮೂರು** ಶ್ಲೋಕಗಳನ್ನು ಅನುವಾದ ಸಹಿತ ವಿವರಿಸಿ.

Translate and explain **any three** Shlokas.

1) निवर्तयामास च राजमार्गे सम्पातमार्तस्य पृथग्जनस्य ।
माभूत्कुमार: सुकुमारचित्त: संविग्नचेता इति मन्यमान: ।।

2) तं तुष्टुवु: सौम्यगुणेन केचिद्ववन्दिरे दीप्ततया तथान्ये ।
सौमुख्यतस्तु श्रियमस्य केचिद्वैपुल्यमाशंसिषुरायुषश्च ।।

3) तस्मिन्कुमारं पथि वीक्ष्यमाणा: स्त्रियो बभुर्गामिव गन्तुकामा: ।
ऊर्ध्वोन्मुखाश्चैनमुदीक्षमाणा नरा बभुर्द्यामिव गन्तुकामा: ।।

4) रूपस्य हन्त्री व्यसनं बलस्य शोकस्य योनिनिधनं रतीनाम् ।
नाश: स्मृतीनां रिपुरिन्द्रियाणामेषा जरा नाम ययैष भग्न: ।।

5) ततो बभाषे स रथप्रणेता कुमार साधारण एष दोष: ।
एवं हि रागै: परिपीड्यमानो रुजातुरो हर्षमुपैति लोक: ।।

IV. **द्वयो:** सन्दर्भं विवृणुत । (2×4=8)

ಯಾವುದಾದರೂ **ಎರಡು** ವಾಕ್ಯಗಳನ್ನು ಸಂದರ್ಭಸಹಿತ ವಿವರಿಸಿ.

Annotate **any two** of the following.

1) आज्ञापयामास विहारयात्राम् ।

2) देवानुयायि ध्वजवत्प्रणेमु: ।

3) क एष भो: सूतो नरोभ्युपेत: ।

4) रुजातुरो हर्षमुपैति लोक: ।

V. **संस्कृत**भाषया उत्तरं लिखत ।

अ) **पञ्चानां** पदानां सन्धिं विभज्य नाम लिखत । (5×1=5)

1) शुद्धाधिवासा:

2) मृगालय:

3) इत्येवम्

4) सूर्योदय:

5) शक्रोऽपि

6) वनौषधि:

7) गणेश:

8) गजानन:

आ) **पञ्चानां** क्रियापदानां लकारपुरुषवचनानि लिखत । (5×1=5)

1) अपठत्

2) गच्छाम:

3) वदन्तु

4) आज्ञापयामास

5) लिखन्ति

6) भविष्याम:

7) करोमि

8) अस्ति

VI. इमं परिच्छेदं पठित्वा प्रश्नानाम् उत्तराणि लिखत । **(5×2=10)**

कस्मिंश्चित् ग्रामे कश्चन कृषकः आसीत् । सः कृषिकार्याणि कृत्वा दिनानि यापयतिस्म । परन्तु तस्य क्षेत्रे फलसमृद्धिः न भवति स्म । कदाचित् स क्षेत्रे कार्यं कुर्वन् समीपे विद्यमानस्य वल्मीकस्य उपरि एकं सर्पं दृष्टवान् । सः चिन्तितवान् एषः सर्पः मम क्षेत्रपालः स्यात् । एतावत्पर्यन्तम् अहम् एतस्य पूजां न कृतवान् । इतः परं अहं निश्चयेन एतं पूजयिष्यामि इति । एवं चिन्तयित्वा सः क्षीरम् आनीय वल्मीकस्य समीपं स्थापितवान् ।

प्रश्नाः

1) कस्मिंश्चित् ग्रामे कः आसीत् ?

2) सः कथं दिनानि यापयतिस्म ?

3) सः कदाचित् क्षेत्रे किं दृष्टवान् ?

4) सः कृषकः किं चिन्तितवान् ?

5) सः किम् आनीय वल्मीकस्य पुरतः स्थापयति ?

AECC – 1.2

ಪ್ರಥಮ ಸೆಮಿಸ್ಟರ್ ಬಿ.ಎಸ್ಸಿ. ಪದವಿ ಪರೀಕ್ಷೆ, ಮೇ/ಜೂನ್ 2022

(NEP Scheme)

ಕನ್ನಡ ಭಾಷೆ

Paper – 01 : ಕನ್ನಡ ವೈಭವ

Time : 2½ Hours

Max. Marks : 60

I. ಕೆಳಗಿನ ಯಾವುದಾದರೂ **ಆರಕ್ಕೆ** ಉತ್ತರಿಸಿ. (6×2=12)

1) ದೇವರ ರುಜು.

2) ದ. ರಾ. ಬೇಂದ್ರೆ.

3) ಗೂಡು ಕಟ್ಟಿರಿ ನಾಡ ಸೆರಗಿನಲಿ.

4) ಚನ್ನವೀರ ಕಣವಿ.

5) ನವೋದಯ ಸಾಹಿತ್ಯ.

6) ಹಸಿವು.

7) ಕಾಣೆಯ ಕುಟುಂಬ.

8) ಅಪ್ಪನ ಸಾವು.

9) ನಾಗೇಶ್ ಹೆಗಡೆ.

II. ಕೆಳಗಿನ ಯಾವುದಾದರೂ **ನಾಲ್ಕು** ಪ್ರಶ್ನೆಗಳಿಗೆ ಸಂಕ್ಷಿಪ್ತವಾಗಿ ಉತ್ತರಿಸಿ. (4×6=24)

10) 'ತುತ್ತಿನ ಚೀಲ' ಕವನದಲ್ಲಿ ಶ್ರೀಮಂತರ ಅಮಾನವೀಯ ವರ್ತನೆ.

11) ಕುಟುಂಬದ ಬೆಳಕು.

12) 'ಭಂಡರು' ಕವನದ ಸ್ತ್ರೀ-ಸಂವೇದನೆ.

13) ಮೇರಿಯ ವ್ಯಕ್ತಿತ್ವ.

14) ಲೇಖಕರ ನೆನಪುಗಳಿಂದ ಮೂಡಿಬರುವ ಅಪ್ಪನ ವ್ಯಕ್ತಿತ್ವ.

15) 'ಟೊಮೇಟೋ' ಕುರಿತು ಇದ್ದ ಅಪನಂಬಿಕೆಗಳು.

P.T.O.

AECC – 1.2

III. ಕೆಳಗಿನ ಯಾವುದಾದರೂ **ಮೂರು** ಪ್ರಶ್ನೆಗಳಿಗೆ ವಿವರವಾಗಿ ಉತ್ತರಿಸಿ. **(3×8=24)**

16) ನಾಡಾಭಿಮಾನದ ಸ್ವರೂಪ 'ನಾಡಿನ ಒಕ್ಕೆ' ಕವಿತೆಯಲ್ಲಿ ಹೇಗೆ ಚಿತ್ರಿತವಾಗಿದೆ ? ವಿವರಿಸಿ.

17) 'ಕತ್ತೆ ಮತ್ತು ಧರ್ಮ' ಕವನದ ಆಶಯವನ್ನು ವಿವರಿಸಿ.

18) ಶಿಥಿಲಗೊಳ್ಳುತ್ತಿರುವ ಮಾನವ ಸಂಬಂಧಗಳು 'ಪ್ರಯಾಣ' ಕಥೆಯಲ್ಲಿ ಹೇಗೆ ಅನಾವರಣಗೊಂಡಿದೆ ? ವಿವರಿಸಿ.

19) ಕಾಣ್ಯ ದುರಂತವು 'ಕೊನೆಯ ಗಿರಾಕಿ' ಕಥೆಯಲ್ಲಿ ಹೇಗೆ ಚಿತ್ರಿತವಾಗಿದೆ ? ವಿವರಿಸಿ.

20) 'ಟೊಮೇಟೋ' ಲೇಖನದ ವೈಶಿಷ್ಟ್ಯವನ್ನು ವಿವರಿಸಿ.

DCCH – 101

I Semester B.Sc. Degree Examination, May/June 2022
(NEP Scheme)
CHEMISTRY (Paper – 1)
Paper DSC – I : Analytical, Physical, Inorganic and Organic Chemistry

Time : 2½ Hours Max. Marks : 60

Instructions : 1) *The question paper has* ***three*** *Parts.*
2) *Answer* ***all*** *the Parts.*
3) *Draw diagrams and write chemical equations* ***wherever necessary.***

PART – A

Answer **any five** of the following questions. **Each** question carries **two** marks. **(5×2=10)**

1. Define the terms "Techniques" and "Methods".
2. What are Titration curves ?
3. Write de-Broglie equation of wave-particle duality and explain the terms involved in it.
4. Give any two limitations of Aufbau principle.
5. State modern periodic law.
6. Mention the importance of BF_3 and $LiAlH_4$.
7. Define the term "Conjugation". Give an example.
8. Chloroacetic acid is stronger than acetic acid. Give reason.

PART – B

Answer **any five** of the following questions. **Each** question carries **four** marks. **(5×4=20)**

9. Mention any eight safety measures taken in the analytical laboratory.
10. Define the terms (a) normality (b) molarity.

P.T.O.

11. Explain eigen values and eigen functions.

12. Explain the significance of quantum numbers.

13. Mention any four applications of ionisation energy of elements.

14. Define electronegativity of an element. Calculate electronegativity of an element using Mullikan's method.

15. Write the difference between hyperconjugation and resonance.

16. Discuss the mechanism of addition of Bromine to alkene.

PART – C

Answer **any five** of the following questions. **Each** question carries **six** marks. **(5×6=30)**

17. a) Mention any eight rules to work in the analytical laboratory.
    b) What is titration ? **(4+2)**

18. a) Discuss the titration curves for weak base and strong acid [NH_3 vs HCl).
    b) What is meant by First Aid ? **(4+2)**

19. a) Write any four postulates of quantum mechanics.
    b) State Hund's rule of maximum multiplicity. **(4+2)**

20. a) State Slater's rules for finding the effective nuclear charge.
    b) Calculate the wavelength of a moving ball of mass 0.6 kg travelling with the velocity 60 m/s [$h = 6.623 \times 10^{-34}$ Js]. **(4+2)**

21. a) Discuss the formation of hydrides and oxides of group–15 elements.
    b) What are isoelectronic ions ? Give example. **(4+2)**

22. a) Define atomic radius of an element. How does it vary across a period and down the group ?

    b) Mention the elements present in group –17. **(4+2)**

23. a) Write the structure of cis and trans 2-butene.

    b) Define the term "Aromaticity".

    c) Explain Wurtz reaction with an example. **(2+2+2)**

24. a) State Saytzeff rule. Give an example.

    b) What is heterolytic cleavage ? Give an example.

    c) What is Diels-Alder reaction ? Give an example. **(2+2+2)**

DCCN – 102

First Semester B.Sc. Degree Examination, May/June 2022
(NEP Scheme)
CLINICAL NUTRITION
Essentials of Macronutrients

Time : 2½ Hours | Max. Marks : 60

PART – A

Answer the following : (6×1=6)

1. Define Glycaemic Index.
2. Glucose + Fructose : Sucrose :: Glucose + Lactose _____
3. Why carbohydrates are called energy food when even lipids also give more energy than carbohydrates ?
4. Mention on Trans fatty acids.
5. What are the Food sources of proteins ?
6. Give a short note on Dietary fibre.

PART – B

Answer the following : (6×2=12)

7. Write a brief note on visible and invisible fat.
8. Specify on the structure of amino acid.
9. Write a note on composition of protein.
10. What is 'Micelle' ? State the significance.
11. Derive the food sources of Carbohydrates and Dietary fibre.
12. Classify the Carbohydrates.

P.T.O.

PART – C

Answer **any 3** of the following : **(3×4=12)**

13. List out the functions of protein.

14. Write on nutritional significance of the carbohydrate.

15. Describe essential and non-essential amino acids. List out the essential amino acids.

16. Illustrate the classification of lipids.

PART – D

Answer **any 6** of the following : **(6×5=30)**

17. Demonstrate the steps of Glycolysis.

18. Explain how the proteins breakdown to amino acids in the body.

19. Give detailed explanation on classification of proteins.

20. Describe the steps involved in the digestion process of carbohydrates with neat labelled diagram.

21. What are the assessment methods of protein quality ? Explain each in detail.

22. Characterize and differentiate Macronutrients in detail.

23. Point out the role of omega-3 and omega-6 fatty acids. Mention the Food sources.

24. Comment on the following :
    a) Resistant Starch
    b) Absorption of lipids
    c) Functions of carbohydrates.

DCFS – 102

I Semester B.Sc. Degree Examination, May/June 2022
(NEP)
CRIMINOLOGY AND FORENSIC SCIENCE
Basic Forensic Chemistry

Time : 2½ Hours Max. Marks : 60

Instructions : 1) *The question paper has* **4** *Parts. Answer* ***all*** *the* ***four*** *Parts.*
2) *Draw diagrams* ***wherever*** *necessary.*

PART – A

Answer **any six** of the following questions. **Each** question carries **one** mark. **(6×1=6)**

1. Define normality.
2. What is bond order ?
3. Give one use for neon.
4. What are f-block elements ?
5. What is meant by tetravalency of carbon ?
6. Define hybridization.
7. Give an example for a complexometric titration.
8. What is standard solution ?

PART – B

Answer **any six** of the following questions. **Each** question carries **two** marks. **(6×2=12)**

9. Define formal charge.
10. Define :
    i) Change in internal energy
    ii) Entropy.
11. Write a note on acidic corrosives.
12. What is lanthanide contraction ?
13. Specify the hybridization of carbon in the following molecules.
    i) CH_4 ii) C_2H_4
    iii) C_2H_2 iv) C_2H_6

P.T.O.

14. Write the IUPAC names of the following molecules.
    i) $CH_3 - CH(OH) - CH = CH - CH_3$
    ii) $CH_3 - CH_2 - CH_2 - CHO$
15. Explain the term Seeding of crystallisation.
16. What is the principle of gravimetric analysis ?

PART – C

Answer **any three** of the following questions. **Each** question carries **four** marks. **(3×4=12)**

17. Give any four differences between Sigma and Pi bonds.
18. Explain any two properties each for anomalous behaviour of beryllium and its diagonal relationship with Aluminium.
19. Explain substitution reaction with an example.
20. Briefly explain electro gravimetric analysis.

PART – D

Answer **any five** of the following questions. **Each** question carries **six** marks. **(5×6=30)**

21. What is hydrogen bonding ? Explain its types with examples.
22. What is an ionic bond ? Explain the formation of ionic bond with illustration.
23. a) Give any two differences between order and molecularity. 2
    b) Define pseudo first order reaction. Give an example. 2
    c) Explain (i) Isotopes (ii) Isobars with an example. 2
24. Discuss the classification of elements into s, p, d and f block elements.
25. What are polymers ? Explain addition and condensation polymers with examples.
26. Explain the classification of organic compounds with one example for each class.
27. Explain distillation and fractional distillation with neat diagram.
28. What are titrimetric analysis ? Briefly explain its classification.

DCFS – 101

First Semester B.Sc. Degree Examination, May/June 2022
(NEP Scheme)
CRIMINOLOGY AND FORENSIC SCIENCE
Introduction to Forensic Science

Time : 2½ Hours

Max. Marks : 60

PART – A

Answer **any 6** questions. **Each** question carries **1** mark. **(6×1=6)**

1. Define Mahazaar.
2. What is oral evidence ?
3. Define Forensic Ballistics.
4. What is Locard's Principle of Exchange ?
5. What is computer forensics ?
6. Define Narcotic Unit.
7. What is Central Reserve Police Force ?
8. What is the role of Dog squad ?

PART – B

Answer **any 6** questions. **Each** question carries **2** marks. **(6×2=12)**

9. What are the qualifications of Forensic Scientists ?
10. Explain the code of conduct for forensic scientist.
11. Explain digital and cyber forensics.
12. What is questioned document examination ?
13. What is Forensic physics and its importance in forensic science ?

P.T.O.

14. What are the functions of forensic chemistry ?

15. Explain central detective training school.

16. What is the role of National Police Academy ?

PART – C

Answer **any 3** questions. **Each** question carries **4** marks. **(3×4=12)**

17. Explain the steps involved in report writing.

18. Explain the contribution of Sir Edgar Hoover through the FBI ?

19. What are the scientific kits available in mobile forensic lab ?

20. Explain the role of CBI and FBI.

PART – D

Answer **any 5** questions. **Each** question carries **6** marks. **(5×6=30)**

21. Explain the principle of Forensic Science.

22. What is the definition, scope, need and functions of forensic science ?

23. Explain the branches of forensic science.

24. What is the history of Forensic Science ?

25. Explain about the branches of Forensic Science laboratories.

26. Explain Central, State and Regional forensic science laboratories.

27. Explain the role of BPR&D.

28. Explain the functions and hierarchical set up of law enforcement agencies.

DCPH – 101

I Semester B.Sc. Examination, May/June 2022
(NEP Scheme)
PHYSICS
Mechanics and Properties of Matter

Time : 2½ Hours

Max. Marks : 60

Instruction : *Answer **all** the Parts. **All** Parts are **compulsory**.*

PART – A

Answer **any six** questions. **Each** question carries **one** mark. **(6×1=6)**

1. $ML^{-1}T^{-2}$ is the dimensional formula for which physical quantity ?
2. If the velocity of a body is doubled, then its kinetic energy becomes how much ?
3. On which principle the Rocket Works ?
4. Why does moon have no atmosphere ?
5. Which material has the maximum Young's modulus ?
6. What is the work done in deforming a body ?
7. At the boiling point of water, what is its surface tension ?
8. Which rain drop fall faster, big ones or small ones ?

PART – B

Answer **any six** questions. **Each** question carries **two** marks. **(6×2=12)**

9. Mention any two uses of dimensional analysis.
10. What is twin paradox ?
11. Where is the centre of mass of the Sun-Earth System located ? Explain.

P.T.O.

12. State Newton's law of Gravitation.

13. Poisson's ratio cannot be negative. Justify.

14. Steel is more elastic than Rubber. Explain.

15. Why needle floats on water surface ? Explain.

16. Define Co-efficient of Viscosity.

PART – C

Answer **any three** questions. **Each** question carries **four** marks. **(3×4=12)**

17. A body of mass 5 kg initially at rest is subjected to a force of 20 N. What is the kinetic energy required by the body at the end of 10 s ?

18. A flywheel of mass 25 kg has a radius of 0.2 m. It is making 240 rpm. Calculate moment of inertia and energy.

19. A wine of 1 mm diameter and 1 m long fixed at one end is stretched by 0.01 mm when a load of 10 kg is attached to its free end. Calculate the Young's modulus of elasticity.

20. A needle 5 cm long can just rest on the surface of water without wetting. What is its weight ? Surface tension of water = 0.07 N/m.

PART – D

Answer **any five** questions. **Each** question carries **six** marks. **(5×6=30)**

21. a) Define linear momentum.

    b) State and explain the law of conservation of linear momentum. Give two examples. **(1+5)**

22. a) What is time dilation ?

    b) Obtain the expression for time dilation on the basis of Lorentz transformation equation. **(1+5)**

23. a) Define angular velocity.

    b) Derive the relation for centre of mass of the system of particles. **(1+5)**

24. Derive an expression for moment of inertia of solid cylinder about an axis passing through its centre and perpendicular to its axis of cylindrical symmetry. **6**

25. Derive an expression for couple per unit twist of the material of the wire. **6**

26. Define :

    i) Neutral axis

    ii) Neutral surface

    iii) Bending moment. **6**

27. Describe the method of determining the surface tension of a liquid by capillary rise. Deduce the formula. **6**

28. Derive Poiseuille's formula for the rate of flow of liquid through a capillary tube. **6**

AECC – 2.2

I Semester B.Sc./B.C.A. Examination, May/June 2022
(NEP)
Paper – 1 : GENERIC ENGLISH (L2)

Time : 2½ Hours

Max. Marks : 60

Instructions : *1) Answer **all** questions.*
*2) Mention question numbers **correctly**.*

SECTION – A

I. Read the passage and answer the following questions : 5

The victory of the small Greek democracy of Athens over the mighty Persian Empire in 490 B.C. is one of the most famous events in history. Darius, king of the Persian Empire, was furious because Athens had interceded for the other Greek city-states in revolt against Persian domination. In anger the king sent an enormous army to defeat Athens. He thought it would take drastic steps to pacify the rebellious part of the empire.

Persia was ruled by one man. In Athens, however, all citizens helped to rule. Ennobled by this participation, Athenians were prepared to die for their city-state. Perhaps this was the secret of the remarkable victory at Marathon, which freed them from Persian rule. On their way to Marathon, the Persians tried to fool some Greek city-states by claiming to have come in peace. The frightened citizens of Delos refused to believe this. Not wanting to abet the conquest of Greece, they fled from their city and did not return until the Persians had left. They were wise, for the Persians next conquered the city of Eritrea and captured its people.

Tiny Athens stood alone against Persia. The Athenian people went to their sanctuaries. There they prayed for deliverance. They asked their gods to expedite their victory. The Athenians refurbished their weapons and moved to the plain of Marathon, where their little band would meet the Persians. At the last moment, soldiers from Plataea reinforced the Athenian troops. The Athenian army attacked, and Greek citizens fought bravely. The power of the mighty Persians was offset by the love that the Athenians had for their city. Athenians defeated the Persians in both archery and hand combat. Greek soldiers seized Persian ships and burned them, and the Persians fled in terror. Herodotus, a famous historian, reports that 6,400 Persians died, compared to only 192 Athenians.

P.T.O.

1) When was the victory of the small Greek democracy of Athens over the mighty Persian Empire ?

2) Why did Darius take drastic steps ?

3) What did the Athenian pray for in the sanctuaries ?

4) Who is Herodotus ?

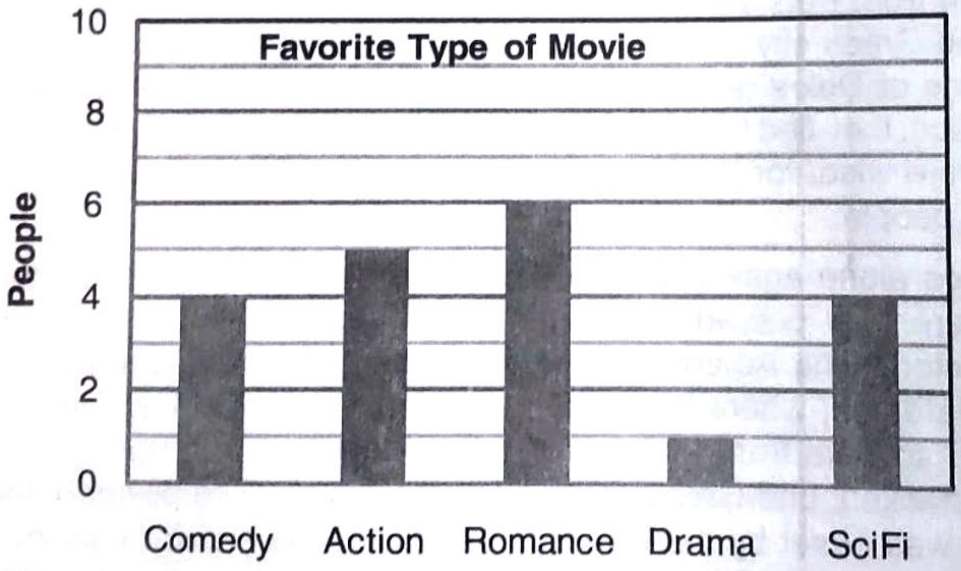
5) What motivated the Athenians to attack the Persians ?

II. Do as directed : 2

1) Arrange the following in MLA format.
Title – Nampally Road
Author – Meena Alexander
Place – New Delhi
Year – 1992

2) Create a brochure about your college cultural fest, events and competitions. 3

III. Read the graph and write a paragraph in about **100-150** words : 5



IV. Answer **any five** of the following questions : 5

1) What is comprehensive listening ?

2) Write any two differences between listening and hearing.

3) Mention the four language skills.

4) What is deep listening ?

5) Which are the two basic ways of communication ?

6) Critical listening requires listener to _____ , _____ and _____ on what he hears.

7) Describe the two types of listening.

V. Answer the following questions :

1) Define active listening and write any one objective of active listening. 2

2) Explain any 4 verbal signs of active listening. 2

3) What are the non verbal signs of active listening ? 1

VI. Do as directed :

1) Introduce your family members to your friend. 2

2) Fill in the blanks : 2

Prashanth: Hello sir, may I know on which platform the train to Delhi will arrive ?

Railway help desk: _____.

Prashanth : _____.

Railway help desk: The train will reach 40 minutes late today.

3) Write a line of request to the receptionist of a Hotel about the availability of room. 1

VII. Answer **any one** of the following questions : 3

Write instructions to make orange juice with the ingredients given below :

a) Orange

b) Water

c) Sugar

d) Ice cubes

OR

State the basic steps you will follow to draw money from an ATM.

VIII. Do as directed : 2

1) Add suitable question tag to the following :
   a) She has done this marvellous work.
   b) You will vote for me.

2) Frame a-Wh question to get the underlined word/phrase as answer : 2
   a) River Nile is the longest river in the world.
   b) We come to College at 9 a.m. every day.

3) Choose the correct form of verb and fill in the blanks : 1

   The student _____ (do/does) the projects excellently.

IX. Choose appropriate linkers and fill in the blanks : 2

a) _____ it was raining, we went out for a drive.

b) She is excellent in singing _____ in dancing.

(as well as, because, since, although)

SECTION – B
(Coursework)

X. Answer **any 5** of the following questions in **two** or **three** sentences : **(2x5=10)**

1) What does the poet demolish in the poem, 'I shall go Back in The New Year' ?
2) Where does the poet wish to go in 'I shall go Back in The New Year' ?
3) What are Aloo's first impressions of London in 'Leaving' ?
4) How was Kalam's teacher Shivasubhramanya Iyer different from others ?
5) When did Kalam confront the uncontrollable energy of nature ?
6) Why was the man afraid to come down from the tree in the lesson, 'The Wolf' ?
7) When is a woman insulted by the husband and the mother-in-law ?

XI. Answer **any two** of the following questions in a paragraph : **(5x2=10)**

1) 'I Shall Go Back in The New Year' expresses the speaker's desire to go back from civilization. Substantiate.
2) The story 'Leaving' dwells on family relations and kinship. Elaborate.
3) Comment on the harmony in Rameshwaram as told by Abdul Kalam.
4) How does the author react to gaining freedom ?

DCEL – 101

I Semester B.Sc. Examination, May/June 2022
(NEP Scheme)
ELECTRONICS (DSC)
Electronic Devices and Circuits

Time : 2½ Hours

Max. Marks : 60

Instructions : 1) *Answer **all** the questions from Part – **A**, **any four** questions from Part – **B** and **any four** questions from Part – **C**.*
2) *It is required to answer all the questions of Part – A in **any one** page, answering the **same** questions multiple times will **not** be considered for evaluation.*

PART – A

1. Answer **all** the sub-divisions : **(12×1=12)**

I. We need a resistor of value 47k with ± 5% tolerance. The sequence of the color band on this resistor should be

a) yellow, violet, yellow and gold b) yellow, violet, orange and silver
c) yellow, violet, orange and gold d) yellow, violet, brown and gold

II. In a step up transformer, the number of turns in the secondary coil is

a) less than primary coil turns b) more than primary coil turns
c) equal to primary coil turns d) none of the above

III. Thevenin's equivalent circuit consists of a

a) constant voltage source with a resistance in parallel
b) constant voltage source with a resistance in series
c) a current source with an voltage source
d) current source in series with a resistance

IV. According to Kirchhoff's current law, the algebraic sum of the currents meeting a point is always

a) zero b) positive
c) negative d) equal to unity

P.T.O.

V. In order to obtain a maximum power from the terminals of a network, the load resistance should be

a) greater than the circuit resistance

b) equal to the circuit resistance

c) less than the circuit resistance

d) double the circuit resistance

VI. Theoretical value of ripple factor for a half wave rectifier is

a) 0.482 b) 0.812

c) 1.11 d) 1.21

VII. Voltage regulator is a circuit which

a) converts the ac voltage to dc voltage

b) smoothens the variations in dc output voltage

c) maintains a constant dc output voltage

d) Converts dc to ac

VIII. In a Bipolar junction transistor

a) emitter is moderate in size and heavily doped

b) emitter is larger in size and heavily doped

c) emitter is smaller in size and heavily doped

d) emitter is smaller in size and lightly doped

IX. The leakage current ICBO flows in

a) the emitter, base and collector leads

b) the emitter and base leads

c) the emitter and collector leads

d) the base and collector leads

X. 4 bit representation in sign magnitude convention for negative number, + 7 is

a) 0111 b) 1111

c) 1101 d) 1010

XI. The next consecutive number in the array of BCD numbers 0111, 1000, 1001 is

a) 1111 0001 b) 1011 0001

c) 1110 d) 0001 0000

XII. _____ are universal gates.

a) NOT b) NAND and NOR

c) X-OR and X-NOR d) NOT, AND and OR

PART – B

Answer **any four** questions : **(4×7=28)**

2. a) Explain the method of conversion of a voltage source into a current source.

   b) Draw the circuit diagram of series RC circuit. Write the expressions for charging and discharging of the circuit, show it graphically.

3. a) State maximum power transfer theorem.

   b) State Norton's theorem, with suitable circuit diagrams. Explain the steps to Nortonise a resistive network.

4. Draw the circuit diagram of full wave bridge rectifier and explain its working. Draw the input and output waveforms. Mention its advantages and disadvantages.

5. a) Define Thermal runaway and stability factor. **(2+5)**

   b) With necessary circuit diagram, explain the working of small signal CE amplifier.

6. a) Explain with an example, the conversion of a decimal number Hexadecimal into its equivalent.

   b) Write the excess-3 code equivalents for all the decimal digits.

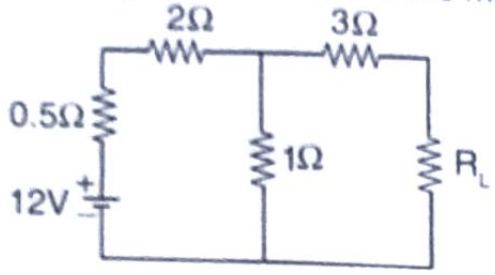
7. a) State and prove De-Morgan's theorem.

   b) Realize AND and OR gates using NAND gate.

PART – C

Answer **any four** questions : **(4×5=20)**

8. Find the value of R_L at which maximum power is transferred to the load in the following circuit. Also, find the maximum power transferred.



9. Calculate efficiency and PIV of a half wave rectifier circuit with an input voltage of 220 V rms and load R_L of 100 Ω. Given r_d – 5Ω and turns ratio of the transformer is 10 : 1.

10. Following observations have been recorded in an experiment to plot the characteristics of an NPN transistor in CE mode. Determine, r_i, r_o and current amplification factor β_{ac}.

V_{BE}(V)	I_B(mA)	V_{CE}(V)	I_C(mA)
0.65	75	6	5
0.70	100	6	10
0.70	100	12	10.5

11. a) Convert the following binary numbers into Hexadecimal :
    i) $110101001_{(2)}$ ii) $1100111_{(2)}$.
    b) Convert the following decimal numbers into binary :
    i) $67_{(10)}$ ii) $78.60_{(10)}$.

12. a) Perform the subtraction of the following binary numbers using 2's complement method.
    i) $11010_{(2)} - 10000_{(2)}$ ii) $111_{(2)} - 1001_{(2)}$.
    b) Add $A2_{(16)}$ with $3D_{(16)}$.

13. Simplify :
    i) $(\overline{A}+C)\cdot(B+\overline{D})$ ii) Convert $(A6C)_{16}$ to octal.

DCPY – 101

I Semester B.A./B.Sc. Examination, May/June 2022
(Semester Scheme) (NEP)
PSYCHOLOGY
Foundations of Psychology

Time : 2½ Hours

Max. Marks : 60

Instructions : 1) ***All three*** *Sections are* ***compulsory***.
2) *Answer must be written either in* ***English*** *or* ***Kannada***.

SECTION – A

ವಿಭಾಗ – ಎ

I. Answer **any 6** questions. **Each** answer carries **2** marks. **(6×2=12)**

ಯಾವುದಾದರೂ **6** ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸಿ. ಪ್ರತಿ ಉತ್ತರಕ್ಕೂ **2** ಅಂಕಗಳು.

1) Mention the goals of Psychology.
ಮನೋವಿಜ್ಞಾನದ ಗುರಿಗಳನ್ನು ಹೆಸರಿಸಿ.

2) Mention any 4 fields of Psychology.
ಮನೋವಿಜ್ಞಾನದ ಯಾವುದಾದರೂ 4 ಕ್ಷೇತ್ರಗಳನ್ನು ಹೆಸರಿಸಿ.

3) What is a neuron ?
ನರತಂತು ಎಂದರೇನು ?

4) What are neurotransmitters ?
ನರವಾಹಕಗಳು ಎಂದರೇನು ?

5) What is division of attention ?
ಅವಧಾನ ವಿಭಜಿಸುವಿಕೆ ಎಂದರೇನು ?

6) What is Hallucination ?
ವಿಭ್ರಮೆ ಎಂದರೇನು ?

7) What is conditioning ?
ಅನುಬಂಧನ ಎಂದರೇನು ?

8) What is reinforcement ?
ಪುನರ್ಬಲನ ಎಂದರೇನು ?

9) Expand SQ3R.
SQ3R ನ್ನು ವಿಸ್ತರಿಸಿ.

P.T.O.

SECTION – B

ವಿಭಾಗ – ಬಿ

II. Answer **any 4** questions. **Each** answer carries **6** marks. **(4×6=24)**

ಯಾವುದಾದರೂ **4** ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸಿ. ಪ್ರತಿ ಉತ್ತರಕ್ಕೆ **6** ಅಂಕಗಳು.

1) Describe the branches of Psychology.
ಮನೋವಿಜ್ಞಾನದ ಕ್ಷೇತ್ರಗಳನ್ನು ವಿವರಿಸಿ.

2) Explain the structure of neuron.
ನರತಂತುವಿನ ರಚನೆಯನ್ನು ವಿವರಿಸಿ.

3) Write a note on synapse and neurotransmitters.
ನರಸಂದು ಮತ್ತು ನರವಾಹಕಗಳನ್ನು ಕುರಿತು ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ.

4) Explain the errors in perception.
ಪ್ರತ್ಯಕ್ಷಾನುಭವ ದೋಷಗಳನ್ನು ವಿವರಿಸಿ.

5) Explain insightful learning.
ಅಂತರ್‌ದೃಷ್ಟಿ ಕಲಿಕೆಯನ್ನು ವಿವರಿಸಿ.

6) Discuss the causes of forgetting.
ವಿಸ್ಮೃತಿಗೆ ಕಾರಣಗಳನ್ನು ಚರ್ಚಿಸಿ.

SECTION – C

ವಿಭಾಗ – ಸಿ

III. Answer **any 3** questions. **Each** answer carries **8** marks. **(3×8=24)**

ಯಾವುದಾದರೂ **3** ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸಿ. ಪ್ರತಿ ಉತ್ತರಕ್ಕೂ **8** ಅಂಕಗಳು.

1) Describe different methods to study Psychology.
ಮನೋವಿಜ್ಞಾನವನ್ನು ಅಧ್ಯಯನ ಮಾಡುವ ವಿವಿಧ ವಿಧಾನಗಳನ್ನು ವರ್ಣಿಸಿ.

2) Explain the structure and functions of central nervous system.
ಕೇಂದ್ರ ನರಮಂಡಲ ವ್ಯವಸ್ಥೆಯ ರಚನೆ ಮತ್ತು ಕಾರ್ಯಗಳನ್ನು ವಿವರಿಸಿ.

3) Explain the subjective and objective determinants of attention.
ಅವಧಾನದ ವ್ಯಕ್ತಿನಿಷ್ಟ ಮತ್ತು ವಸ್ತುನಿಷ್ಟ ನಿರ್ಧಾರಕಗಳನ್ನು ವಿವರಿಸಿ.

4) Explain classical conditioning.
ಶಾಸ್ತ್ರೀಯ ಅನುಬಂಧನವನ್ನು ವಿವರಿಸಿ.

5) Explain different techniques to improve memory.
ಸ್ಮೃತಿಯನ್ನು ಉತ್ತಮಪಡಿಸುವ ವಿವಿಧ ತಂತ್ರಗಳನ್ನು ವಿವರಿಸಿ.

DCFS 103

First Semester B.Sc. Degree Examination, May/June 2022
(NEP Scheme)
FORENSIC SCIENCE
Criminology

Time : 2½ Hours

Max. Marks : 60

PART – A

Answer **any 6** questions. **Each** question carries **1** mark : (6×1=6)

1. Define crime.
2. Define routine activity theory.
3. What is juvenile delinquency ?
4. What is a White-Collar criminal ?
5. What is retributive theory ?
6. Define punishment.
7. What is victimless crime ?
8. Define primary victimization.

PART – B

Answer **any 6** questions. **Each** question carries **2** marks : (6×2=12)

9. What is social learning theory ?
10. Define crime triangle.
11. What are the causes of crime ?

P.T.O.

12. Explain hate crime and violent crime.

13. Define probation.

14. What are the types of punishment ?

15. Explain victim precipitation.

16. Explain victimization.

PART – C

Answer **any 3** questions. **Each** question carries **4** marks : **(3×4=12)**

17. Explain biological theory.

18. Explain types of criminals.

19. Explain theories of punishment.

20. Explain the historical development of victimology.

PART – D

Answer **any 5** questions. **Each** question carries **6** marks : **(5×6=30)**

21. What is crime and explain the characteristics and elements of crime.

22. Explain pre-classical, classical and neo-classical theory.

23. Explain types of crimes.

24. Explain the concept of child labour.

25. What are the unusual problems arising in correctional administration ?

26. Explain probation, parole and aftercare.

27. Explain the psychodynamics of victimization.

28. Explain victimization proneness, victim vulnerability, victim precipitation and victim genesis.

DCMT – 101

I Semester B.A./B.Sc. Examination, May/June 2022
(NEP Scheme)
MATHEMATICS
Algebra – I and Calculus – I

Time : 2½ Hours | Max. Marks : 60

Instruction : *Answer* ***all*** *the Parts.*

PART – A

I. Answer **any six** of the following : **(6×2=12)**

1) Define the rank of a matrix.

2) Find whether the system of equations has a non-trivial solution or not.

$x + y = 0; x - y - z = 0; 3x + y - z = 0$

3) Check whether limit exists or not for $f(x) = \frac{x}{|x|}$.

4) State Cauchy's mean value theorem.

5) Give the expressions for polar sub-tangent and polar sub-normal.

6) Find $\frac{ds}{dx}$ for the curve $y = a\log\sec\left(\frac{x}{a}\right)$.

7) Find the Asymptotes parallel to the co-ordinate axes to the curve $x^2y^2 - a^2x^2 = a^2y^2$.

8) Find the n^{th} derivative of $y = e^{mx}$.

PART – B

II. Answer **any three** of the following : **(3×4=12)**

1) Find the rank of the Matrix 'A' by reducing to row reduced Echelon form

$$A = \begin{bmatrix} 1 & 0 & 2 & -2 \\ 2 & -1 & 0 & -1 \\ 1 & 0 & 2 & -1 \\ 4 & -1 & 3 & -1 \end{bmatrix}.$$

P.T.O.

2) Show that the following system of equations are consistent and hence solve

$x + y + z = 1$

$x + 2y + 3z = 4$

$x + 3y + 5z = 7$

$x + 4y + 7z = 10$

3) Prove that the rank of the transpose of a matrix is same as that of the original matrix.

4) Find the Eigen values and the Eigen vectors of the matrix $A = \begin{bmatrix} 5 & 4 \\ 1 & 2 \end{bmatrix}$.

5) Find the inverse of the matrix $A = \begin{bmatrix} 1 & 4 \\ 2 & 3 \end{bmatrix}$ using Cayley – Hamilton theorem.

PART – C

III. Answer **any three** of the following : **(3×4=12)**

1) Prove that a function which is continuous in [a, b] attains its bounds atleast once in [a, b].

2) Verify Rolle's theorem for the function $f(x) = 8x - x^2$ in [2, 6].

3) State and prove Lagrange's mean value theorem for continuous functions.

4) Expand $f(x) = \log(1 + \sin x)$ upto the terms containing x^4 using Maclaurin's series.

5) Evaluate : $\lim_{x \to 0} \left(\frac{1}{x^2} - \frac{1}{x \tan x} \right)$.

PART – D

IV. Answer **any three** of the following : **(3×4=12)**

1) Show that the angle between the radius vector and the tangent to the curve is $\tan\phi = r\frac{d\theta}{dr}$.

2) Show that the curves $r^m = a^m \cos(m\theta)$ and $r^m = a^m \sin(m\theta)$ intersect orthogonally.

3) Find the Pedal equation of the curve $r = a(1 - \cos\theta)$.

4) Find the radius of curvature of the curve $y = a\cosh\left(\frac{x}{a}\right)$.

5) Find the center of curvature for the curve $y^2 = 4ax$ at (a, a).

PART – E

V. Answer **any three** of the following : **(3×4=12)**

1) Find the n^{th} derivative of the function $y = \frac{(2x-1)}{(x-2)(x+1)}$.

2) State and prove Leibnitz theorem to find the n^{th} derivative of product of two functions.

3) If $y = \tan^{-1}x$, then show that $(1 + x^2)y_{n+1} + 2nxy_n + n(n-1)y_{n-1} = 0$.

4) Determine the position and nature of the double points of the curve $x^3 + 2x^2 + 2xy - y^2 + 5x - 2y = 0$.

5) Trace the curve Astroid $x^{2/3} + y^{2/3} = a^{2/3}$, $(a > 0)$.

DCCS – 101

I Semester B.Sc. Degree Examination, May/June 2022
(NEP)
COMPUTER SCIENCE (Paper – I)
DSC – 1 : Computer Fundamentals and Programming in C

Time : 2½ Hours Max. Marks : 60

Instruction : *Answer* ***all*** *the Sections.*

SECTION – A

I. Answer **any 6** questions, **each** question carries **2** marks : (6×2=12)

1) What is data processing ?
2) Write any two features of C.
3) What is token ? Give example.
4) What is type conversion ? Mention its types.
5) What is if else statement ? Give example.
6) What is a string ?
7) What is a pointer ? Give example.
8) What is function prototype ? Give example.
9) Define union.

SECTION – B

II. Answer **any 4** questions, **each** question carries **6** marks : (4×6=24)

10) Explain the following :
    i) Microcomputer
    ii) Minicomputer.
11) Explain basic structure of C program with example.
12) Explain any 3 types of operators in C.
13) Explain the working of while loop with example.
14) What is an array ? Write a note on memory representation of single dimensional array.
15) Explain the components of user defined functions.

P.T.O.

SECTION – C

III. Answer **any 3** questions, **each** question carries **8** marks : **(3×8=24)**

16) a) Convert decimal number 1032.56 to binary number. **4**

b) Convert Hexa decimal $[3FC.82]_{16}$ to Octal. **4**

17) Explain formatted I/O functions with example. **8**

18) Explain the following with example : **(3+3+2)**

i) goto

ii) break

iii) continue.

19) Explain any four string handling functions with example. **8**

20) Write a C program to check a number for prime by defining isprime() function. **8**

AECC – 1.2

ಪ್ರಥಮ ಸೆಮಿಸ್ಟರ್ ಬಿ.ಎಸ್ಸಿ. ಪದವಿ ಪರೀಕ್ಷೆ, ಮೇ/ಜೂನ್ 2022

(NEP Scheme)

ಕನ್ನಡ ಭಾಷೆ

Paper – 01 : ಕನ್ನಡ ವೈಭವ

Time : 2½ Hours

Max. Marks : 60

I. ಕೆಳಗಿನ ಯಾವುದಾದರೂ **ಆರಕ್ಕೆ** ಉತ್ತರಿಸಿ. **(6×2=12)**

1) ದೇವರ ರುಜು.

2) ದ. ರಾ. ಬೇಂದ್ರೆ.

3) ಗೂಡು ಕಟ್ಟಿರಿ ನಾಡ ಸೆರಗಿನಲಿ.

4) ಚನ್ನವೀರ ಕಣವಿ.

5) ನವೋದಯ ಸಾಹಿತ್ಯ.

6) ಹಸಿವು.

7) ಕಾಣೆಯ ಕುಟುಂಬ.

8) ಅಪ್ಪನ ಸಾವು.

9) ನಾಗೇಶ್ ಹೆಗಡೆ.

II. ಕೆಳಗಿನ ಯಾವುದಾದರೂ **ನಾಲ್ಕು** ಪ್ರಶ್ನೆಗಳಿಗೆ ಸಂಕ್ಷಿಪ್ತವಾಗಿ ಉತ್ತರಿಸಿ. **(4×6=24)**

10) 'ತುತ್ತಿನ ಚೀಲ' ಕವನದಲ್ಲಿ ಶ್ರೀಮಂತರ ಅಮಾನವೀಯ ವರ್ತನೆ.

11) ಕುಟುಂಬದ ಬೆಳಕು.

12) 'ಭಂಡರು' ಕವನದ ಸ್ತ್ರೀ-ಸಂವೇದನೆ.

13) ಮೇರಿಯ ವ್ಯಕ್ತಿತ್ವ.

14) ಲೇಖಕರ ನೆನಪುಗಳಿಂದ ಮೂಡಿಬರುವ ಅಪ್ಪನ ವ್ಯಕ್ತಿತ್ವ.

15) 'ಟೊಮೇಟೋ' ಕುರಿತು ಇದ್ದ ಅಪನಂಬಿಕೆಗಳು.

P.T.O.

III. ಕೆಳಗಿನ ಯಾವುದಾದರೂ **ಮೂರು** ಪ್ರಶ್ನೆಗಳಿಗೆ ವಿವರವಾಗಿ ಉತ್ತರಿಸಿ. **(3×8=24)**

16) ನಾಡಾಭಿಮಾನದ ಸ್ವರೂಪ 'ನಾಡಿನ ಏಕತೆ' ಕವಿತೆಯಲ್ಲಿ ಹೇಗೆ ಚಿತ್ರಿತವಾಗಿದೆ ? ವಿವರಿಸಿ.

17) 'ಕತ್ತೆ ಮತ್ತು ಧರ್ಮ' ಕವನದ ಆಶಯವನ್ನು ವಿವರಿಸಿ.

18) ಶಿಥಿಲಗೊಳ್ಳುತ್ತಿರುವ ಮಾನವ ಸಂಬಂಧಗಳು 'ಪ್ರಯಾಣ' ಕಥೆಯಲ್ಲಿ ಹೇಗೆ ಅನಾವರಣಗೊಂಡಿದೆ ? ವಿವರಿಸಿ.

19) ಕಾಣಿಯ ದುರಂತವು 'ಕೊನೆಯ ಗಿರಾಕಿ' ಕಥೆಯಲ್ಲಿ ಹೇಗೆ ಚಿತ್ರಿತವಾಗಿದೆ ? ವಿವರಿಸಿ.

20) 'ಟೊಮೇಟೋ' ಲೇಖನದ ವೈಶಿಷ್ಟ್ಯವನ್ನು ವಿವರಿಸಿ.

QP – 199

I Semester B.Sc. Examination, March/April 2022
(CBCS) (Repeater) (2014 – 15 and Onwards)
BIOTECHNOLOGY – I
Cell Biology and Genetics

Time : 3 Hours Max. Marks : 70

Instruction *: Draw* ***neat*** *labelled diagrams* ***wherever*** *necessary.*

SECTION – A

I. Write short notes on the following. **(5×2=10)**

1) Importance of plastid with example.
2) Free radicals.
3) rRNA.
4) Autosome.
5) X-linked inheritance.

SECTION – B

II. Answer **any four** of the following. **(4×5=20)**

6) Describe in detail about Plasma membrane.
7) Write about the golgi complex with reference to structure.
8) Describe Lampbrush chromosomes.
9) Give a note on structural aberrations with examples.
10) What are mutagenic agents ? Add a note on frameshift mutation.

SECTION – C

III. Answer **any three** of the following. **(3×10=30)**

11) Write short note on Davson and Daniell model of plasma membrane.
12) Explain cell cycle.
13) Explain different types of cytoskeleton structure and function.
14) Give an account on mechanism of crossing over and its importance.

P.T.O.

15) Write a note on :
   a) Special type of chromosome.
   b) Multiple factor – Skin color in human.

SECTION – D

IV. Answer the following in **a word** or **a sentence each**. **(10×1=10)**

16) Vacuoles.
17) Transport protein.
18) Sodium potassium pump.
19) 70S ribosome.
20) Actin filament.
21) Down's syndrome.
22) Expand CMS.
23) F_1 progeny.
24) Base pair.
25) XX – XY system.

DCBT – 101

First Semester B.Sc. Examination, May/June 2022
(NEP Scheme)
BIOTECHNOLOGY
DSC – 1 : Cell Biology and Genetics

Time : 2½ Hours Max. Marks : 60

Instruction : *Draw **neat** labelled diagrams **wherever** necessary.*

SECTION – A

I. Write short answers on the following : (5×2=10)

1) Lysosomes
2) Primary constriction
3) Eukaryotes
4) Programmed cell death
5) Back cross.

SECTION – B

II. Answer **any four** of the following : (4×5=20)

1) Describe the structure and functions of peroxisomes.
2) Give an account on free radical theory of aging.
3) Enumerate the differences between mitosis and meiosis.
4) Explain the principle of dominance.
5) Give an account of importance of crossing over.

SECTION – C

III. Answer **any three** of the following : (3×10=30)

1) Describe the fluid mosaic model of plasma membrane in detail.
2) Explain the structure of chloroplast. Add a note on its function.
3) Give an detailed account of structural organisation of nucleosomes.
4) Give an account of significance of cytoplasmic inheritance with suitable examples.
5) What are multiple alleles ? Explain the inheritance of ABO blood group.

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AECC – 9.2

I Semester B.Sc./B.Sc.(FAD) Examination, May/June 2022
(NEP Scheme)
MALAYALAM LANGUAGE (Paper – I) (Part – I)

Time : 2½ Hours | Max. Marks : 60

SECTION – A

I. ബ്രാക്കറ്റിൽ നിന്നും **ശരിയായ** ഉത്തരം തെരഞ്ഞെടുത്തെഴുതുക. (5×1=5)

1) കല്ല്യാണസൗഗന്ധികം ഏത് പ്രസ്ഥാനത്തിൽ ഉൾപ്പെടുന്നു ?
   1) നാടക പ്രസ്ഥാനം 2) തുള്ളൽ
   3) ചാക്യാർകൂത്ത് 4) കഥകളി

2) ദാവീദിന്റെ സൈന്യാധിപൻ ആര് ?
   1) യോവാബ് 2) അമാസ
   3) നാഥാൻ 4) ഊറിയ

3) 'ബോധിവൃക്ഷത്തിന്റെ ഇലകൾ' എഴുതിയതാര് ?
   1) ഗുപ്തൻ നായർ 2) പി. എൻ. ദാസ്
   3) ജോസഫ് മുണ്ടശ്ശേരി 4) എം. പി. പോൾ

4) ''കല്ല്യാണസൗഗന്ധികം'' എഴുതിയതാര് ?
   1) എഴുത്തച്ഛൻ 2) കുഞ്ചൻനമ്പ്യാർ
   3) ചെറുശ്ശേരി 4) കുമാരനാശാൻ

5) കല്ല്യാണസൗഗന്ധികം അന്വേഷിച്ച് പോകുന്നതാര് ?
   1) ഹനുമാൻ 2) ഭീമൻ
   3) അർജ്ജുനൻ 4) നകുലൻ

II. ഏതെങ്കിലും **അഞ്ചെണ്ണ**ത്തിന് ഉത്തരമെഴുതുക. (5×3=15)

1) ''മന്ദാകിനിജലം കൊണ്ടുവന്നാദരാൽ
   മന്നിടം തന്നിൽ പരത്തി മഹാരഥൻ''

2) ''ചപല സ്ത്രീകളെപ്പോലെ
   കഥിക്കുന്നതെന്തേടോ ബാലേ''

3) ''വണ്ടുകളെല്ലാം മുരണ്ടു കൂതൂഹലം
   പൂണ്ടുവനങ്ങളിൽ പണ്ടുള്ള പുഷ്പങ്ങൾ''

4) ''കൊണ്ടു തകർത്തു തിമർത്തു ശമിപ്പതിൽ
   വേണ്ടും ബലം നിനക്കുണ്ടെന്നു നിർണ്ണയം.''

P.T.O.

5) ''നല്ലൊരു കീർത്തി ലഭിച്ച കഥാമൃതം
കില്ലു കൂടാതെ കഥിപ്പാൻ തുടർന്നവൻ''

6) ''പണ്ടെടോ നിൻകരംകൊണ്ടു ഹിഡിംബന്റെ
കണ്ടും പിടിച്ചാശു കണ്ടിച്ചെറിഞ്ഞതും''

7) ''കാട്ടാള രാജാനും കൂട്ടരുമൊക്കവേ
വേട്ടയ്ക്കു കോപ്പുകൾ കൂട്ടി പുറപ്പെട്ടു''

8) ''കൊറ്റിനില്ലാത്തവൻ കോപ്പു മോഹിക്കുമോ
വറ്റിനില്ലാത്തവൻ പാൽ കുടിച്ചീടുമോ''

SECTION – B

III. ഏതെങ്കിലും **അഞ്ചെണ്ണത്തിന്** ഉത്തരമെഴുതുക. **(5×4=20)**

1) വചനം എന്നാലെന്ത് ? ഉദാഹരണസഹിതം വിവരിക്കുക.

2) ഹനുമാൻ എന്ന കഥാപാത്രത്തെ വിവരിക്കുക.

3) ഗുർജിഫ് തിയ്യറി എന്നാലെന്ത് ?

4) 'ബത്ശേബ'യ്ക്ക് നാടകത്തിലുള്ള പ്രാധാന്യമെന്ത് ?

5) ലിംഗത്തിന് വ്യാകരണത്തിലുള്ള പ്രാധാന്യമെന്ത് ? വിവിധ തരത്തിലുള്ള ലിംഗം – ഉദാഹരണ സഹിതം വിവരിക്കുക.

6) യോവാസ് പ്രവാചകൻ ആര് ? നാടകത്തിലെ സ്ഥാനമെന്ത് ?

7) സൗന്ദര്യം കാണാൻ കഴിയും അനുഭവിക്കാനാവില്ല –സന്ദർഭം, ആശയം വ്യക്തമാക്കുക.

8) ദാവീദ് ചെയ്ത തെറ്റ് – വിവരിക്കുക.

SECTION – C

IV. ഏതെങ്കിലും **നാലെണ്ണത്തിന്** ഉത്തരമെഴുതുക. **(4×5=20)**

1) 'ആ മനുഷ്യൻ നീ തന്നെ' ആസ്വാദനമെഴുതുക.

2) ധ്യാനത്തിന്റെ പ്രത്യേകതകൾ വിവരിക്കുക.

3) ഊറിയ്യ് നാടകത്തിലുള്ള പ്രാധാന്യം.

4) 'ചന്ദ്രനു നേരെ ചൂണ്ടുന്ന വിരൽ' – എന്നതിലെ പരാമർശങ്ങൾ എന്തെല്ലാം ?

5) ഹനുമാന്റെ മാർഗ്ഗ നിരോധനത്തിന്റെ പ്രസക്തി വിവരിക്കുക.

6) ''യാഥാർത്ഥ്യത്തിലേക്കൊരു വാതിൽ'' – വിവരിക്കുക.

AECC – 4.5

I Semester B.C.A./B.Sc.(FAD) Examination, May/June 2022
(NEP Scheme)
HINDI LANGUAGE
Paper – I : Niband Karyalay Hindi Aur Sankshepan

Time : 2½ Hours

Max. Marks : 60

I. निम्नलिखित प्रश्नों का **एक** शब्द या वाक्य में उत्तर लिखिए। **(10×1=10)**

1) 'शेप ऑफ थिंग्स टू कम ' पुस्तक के लेखक का नाम लिखिए ।
2) इटली के प्रसिद्ध निर्वासित देश भक्त का नाम क्या है ?
3) वैशाली नगरी हजारों वर्ष के नर-नारियों की कैसी कथा सुनाती है ?
4) प्रेमचन्द ने घटना प्रधान कथा के स्थान पर किस प्रधान कथा की सृष्टि की है ?
5) साहित्यकार बहुधा किससे प्रभावित होता है ?
6) आलोपी की माँ क्या काम करती थी ?
7) दुकान के नौकर का नाम क्या रख देना चाहिए ?
8) 'लार्ड कार्नवालिस' को दूसरी बार किस साल में गवर्नर जनरल बनाया गया ?
9) गवर्नर जनरल की उम्र क्या है ?
10) जीवन का घन घोर विनाश किसमें है ?

II. किन्हीं **दो** का सप्रसंग व्याख्या कीजिए। **(2×7=14)**

1) 'आज की शानदार मुलाकात से बहुत आनन्द और इस क्षणों की याद बहुत दिनों तक जीवन को गुदगुदाते रहेगी।'
2) 'तुम हृदय के भी अन्धे हो, ऐसी अन्धेरी गलियों में प्राण देकर कुद्द स्वर्ग नहीं पहुँच जाओगे।'
3) 'मुझे लगा दरवाजे पर फिर दस्तक हुई। मैने पूछा- कौन ?' जबाब आया- मैं बसन्त! मैं खीझ उठा "कह दिया कि फिर आना।"

P.T.O.

III. किसी **एक** प्रश्न का उत्तर लिखिए। **(1×16=16)**

'जीवन में साहित्य का स्थान' निबन्ध का सारांश लिखिए एवं साहित्य की विशेषताओं पर प्रकाश डालिए।

अथवा

'आनन्द के क्षण' पाठ के आधार पर जीवन में आनन्द के क्षण के महत्व पर प्रकाश डालिए।

IV. **एक** पर टिप्पणी लिखिए। **(1×5=5)**

1) आलोपी

2) बुद्धदेव।

V. किसी **दो** प्रश्नों का उत्तर लिखिए। **(2×4=8)**

1) टिप्पण लेखन किसे कहते हैं तथा कितने प्रकार के होते हैं ?

2) प्रतिवेदन कितने प्रकार के होते हैं ? सविस्तार लिखिए।

3) आलेखन की परिभाषा देते हुए उसकी विशेषताओं पर प्रकाश डालिए।

VI. निम्नलिखित गद्यांश का उचित शीर्षक देते हुए **एक तिहाई** शब्दों में संक्षेपण कीजिए। **(1×7=7)**

परिश्रम और निरन्तर अभ्यास से कठिन समझे जाने वाले कार्य भी सुगम हो जाया करते हैं। ज्ञान, भाव और कर्म से सम्बन्धित सभी क्षेत्रों में इसका चमत्कार देखा जा सकता है, नियमित अभ्यास वज्र से वज्र मूर्ख को भी चतुर बना देता है। प्यार की अधिकता और नि:स्वार्थकता भयंकर से भयंकर और दुष्ट से दुष्ट व्यक्ति को भी अपना बना लेती है। पापी से पापी भी ईश्वर की कृपा का भागीदार बन जाता है। बट्टे की रगड़ से पत्थर की सिल भी चिकनी हो जाती है।

AECC – 4.2

I Semester B.Sc. Examination, May/June 2022
(NEP Scheme)
HINDI LANGUAGE
Paper – I : Kahani Aur Vyakaran/Sankshepan

Time : 2½ Hours

Max. Marks : 60

I. निम्नलिखित प्रश्नों के उत्तर **एक** शब्द या वाक्यांश में लिखिए। **(10×1=10)**

1) धन किसका ईंधन है ?

2) साधु के कितने बच्चे थे ?

3) आवश्यकताओं ने किसे बहुत शीघ्र चतुर बना दिया था ?

4) 'झाँकी' कहानी के लेखक कौन है ?

5) घोडे के लिए सरकारी रेट कितने रुपए थे ?

6) तीसरे दिन लेखक के कमरे से क्या गायब हो गया था ?

7) बाबू राधाकृष्ण की बेटी का नाम क्या था ?

8) सीताराम के कितने बच्चे है ?

9) मंजव्वा की बेटी का नाम क्या है ?

10) गोपाल नंबोदरी कौन है ?

II. किन्हीं **दो** के संदर्भ सहित व्याख्या कीजिए। **(2×7=14)**

1) ''महाराज यदि साधु-संतों की सेवा न की तो इस मनुष्य देह से क्या लाभ ही क्या ?''

2) ''बाबूजी नमस्ते आप कहिए तो खेल दिखाऊँ ?''

3) ''विवाह की बात तो पीछे होगी। क्या रूप-रंग बहुत खराब है ?''

III. 'पुनर्जन्म' कहानी का सारांश लिखकर उसकी विशेषताओं पर प्रकाश डालिए। **(1×16=16)**

अथवा

'माँ मुझे स्कूल जाना है' कहानी के आधार पर लक्ष्मी एवं हेडमास्टर का चरित्र-चित्रण कीजिए।

P.T.O.

IV. किसी **एक** पर टिप्पणी लिखिए। (1×5=5)

1) गौरी

2) द्वारकानाथ।

V. प्रयोजन मूलक हिन्दी–किन्हीं **दो** का उत्तर लिखिए। (2×4=8)

1) प्रतिवेदन की विशेषताएँ लिखिए।

2) आलेखन की विशेषताएँ लिखिए।

3) टिप्पण का उद्देश्य या महत्व को लिखिए।

VI. उचित शीर्षक देते हुए **एक तिहाई** शब्दों में संक्षेपण कीजिए। (1×7=7)

मनुष्य को अपने जीवन में कुछ न कुछ उद्देश्य रखना–चाहिए। उद्देश्य के बिना जीवन अर्थहीन हो जाता है। किसान सीधा–सादा सरल, पवित्र और मेहनती होता है। किसान को अपनी मेहनत करने के साथ–साथ देश की सेवा भी करनी है।

प्रत्येक मनुष्य के जीवन में उद्देश्यहीन मनुष्य बिना परिवार की नाव की तरह है। विभिन्न मनुष्य के विभिन्न उद्देश्य होते है। बहुत लोग धन कमाना चाहते है और धन कमाना ही उनका उद्देश्य बन जाता है। कुछ लोग केवल आनंद चाहते है तुम उन्हें योग्य और सफल किसान बनाने का उद्योग कर सकते है।

AECC – 6.2

I Semester B.Sc./B.C.A./B.H.M. Examination, May/June 2022
(NEP)
LANGUAGE SANSKRIT (Paper – I)
Buddha Charitam III Canto, Grammar and Comprehension

Time : 2½ Hours | Max. Marks : 60

Instructions : *i) Answer in* ***Sanskrit/Kannada/English****.*

ii) Answer Question Nos. ***I, V*** *and* ***VI*** *in* ***Sanskrit only****.*

I. समीचीनम् उत्तरं चित्वा लिखत । **(10×1=10)**

1) बुद्धचरितम् कीदृशं काव्यम् ?

अ) लघुकाव्यम् आ) गीतकाव्यम् इ) महाकाव्यम् ई) नीतिकाव्यम्

2) सिद्धार्थस्य माता का ?

अ) मायादेवी आ) छायादेवी इ) गङ्गादेवी ई) उषादेवी

3) कुमारः अन्तर्गृहे कः इव अवरुद्धः ?

अ) श्वानः आ) मार्जालः इ) सिंहः ई) नागः

4) स्यन्दनं कति तुरङ्गैः युक्तमासीत् ?

अ) त्रीभिः आ) चतुर्भिः इ) षड्भिः ई) पञ्चभिः

5) पौराः देवानुयायि किंवत् प्रणेमुः ?

अ) चक्रवत् आ) पुष्पवत् इ) ध्वजवत् ई) पत्रवत्

6) महाकुलेभ्यः काः निसृताः ?

अ) नार्यः आ) नद्यः इ) आज्ञाः ई) दासीजनाः

7) नरेण शिशुत्वे किं पीतम् ?

अ) जलं आ) तक्रम् इ) पयः ई) विषम्

8) सुमहान् अनर्थः कः ?

अ) धर्मः आ) अर्थः इ) कामः ई) रोगः

9) रूपस्य हन्त्री का ?

अ) जरावस्था आ) बाल्यावस्था इ) युवावस्था ई) तरूणावस्था

10) मृतः कैः मनुष्यैः अनुगम्यमानः आसीत् ?

अ) सन्तुष्टैः आ) तृप्तैः इ) दीनैः ई) हर्षितैः

P.T.O.

II. **एकस्य** प्रश्नस्य उत्तरं लिखत । **(1×10=10)**

ಯಾವುದಾದರೂ **ಒಂದು** ಪ್ರಶ್ನೆಯನ್ನು ಉತ್ತರಿಸಿರಿ.

Answer **any one** of the following.

1) अश्वघोषस्य देश-काल-कृती: अधिकृत्य प्रबन्धं लिखत ।

ಅಶ್ವಘೋಷನ ದೇಶ-ಕಾಲ-ಕೃತಿಗಳನ್ನು ಕುರಿತು ಪ್ರಬಂಧವನ್ನು ಬರೆಯಿರಿ.

Write an essay about the place-date and works of Ashwaghosha.

2) सिद्धार्थस्य संवेग कारणीभूता: घटना: विवृणुत ।

ಸಿದ್ಧಾರ್ಥನ ಸಂವೇಗಕ್ಕೆ ಕಾರಣವಾದ ಘಟನೆಗಳನ್ನು ವಿವರಿಸಿ.

Describe the incidents which caused anxiety in Siddhartha.

III. **त्रयाणां** श्लोकानाम् अनुवादं कृत्वा विवृणुत । **(3×4=12)**

ಯಾವುದಾದರೂ **ಮೂರು** ಶ್ಲೋಕಗಳನ್ನು ಅನುವಾದ ಸಹಿತ ವಿವರಿಸಿ.

Translate and explain **any three** Shlokas.

1) निवर्तयामास च राजमार्गे सम्पातमार्तस्य पृथग्जनस्य ।
माभूत्कुमार: सुकुमारचित्त: संविग्नचेता इति मन्यमान: ।।

2) तं तुष्टुवु: सौम्यगुणेन केचिद्ववन्दिरे दीप्ततया तथान्ये ।
सौमुख्यतस्तु श्रियमस्य केचिद्वैपुल्यमाशंसिषुरायुषश्च ।।

3) तस्मिन्कुमारं पथि वीक्ष्यमाणा: स्त्रियो बभुर्गामिव गन्तुकामा: ।
ऊर्ध्वोन्मुखाश्चैनमुदीक्षमाणा नरा बभुर्द्यामिव गन्तुकामा: ।।

4) रूपस्य हन्त्री व्यसनं बलस्य शोकस्य योनिनिधनं रतीनाम् ।
नाश: स्मृतीनां रिपुरिन्द्रियाणामेषा जरा नाम ययैष भग्न: ।।

5) ततो बभाषे स रथप्रणेता कुमार साधारण एष दोष: ।
एवं हि रागै: परिपीड्यमानो रुजातुरो हर्षमुपैति लोक: ।।

IV. **द्वयो:** सन्दर्भं विवृणुत । **(2×4=8)**

ಯಾವುದಾದರೂ **ಎರಡು** ವಾಕ್ಯಗಳನ್ನು ಸಂದರ್ಭಸಹಿತ ವಿವರಿಸಿ.

Annotate **any two** of the following.

1) आज्ञापयामास विहारयात्राम् ।

2) देवानुयायि ध्वजवत्प्रणेमु: ।

3) क एष भो: सूतो नरोभ्युपेत: ।

4) रुजातुरो हर्षमुपैति लोक: ।

V. **संस्कृत**भाषया उत्तरं लिखत ।

अ) **पञ्चानां** पदानां सन्धिं विभज्य नाम लिखत । **(5×1=5)**

1) शुद्धाधिवासा:

2) मृगालय:

3) इत्येवम्

4) सूर्योदय:

5) शक्रोऽपि

6) वनौषधि:

7) गणेश:

8) गजानन:

आ) **पञ्चानां** क्रियापदानां लकारपुरुषवचनानि लिखत । **(5×1=5)**

1) अपठत्

2) गच्छाम:

3) वदन्तु

4) आज्ञापयामास

5) लिखन्ति

6) भविष्याम:

7) करोमि

8) अस्ति

VI. इमं परिच्छेदं पठित्वा प्रश्नानाम् उत्तराणि लिखत । (5×2=10)

कस्मिंश्चित् ग्रामे कश्चन कृषकः आसीत् । सः कृषिकार्याणि कृत्वा दिनानि यापयतिस्म । परन्तु तस्य क्षेत्रे फलसमृद्धिः न भवति स्म । कदाचित् स क्षेत्रे कार्यं कुर्वन् समीपे विद्यमानस्य वल्मीकस्य उपरि एकं सर्पं दृष्टवान् । सः चिन्तितवान् एषः सर्पः मम क्षेत्रपालः स्यात् । एतावत्पर्यन्तम् अहम् एतस्य पूजां न कृतवान् । इतः परं अहं निश्चयेन एतं पूजयिष्यामि इति । एवं चिन्तयित्वा सः क्षीरम् आनीय वल्मीकस्य समीपं स्थापितवान् ।

प्रश्नाः

1) कस्मिंश्चित् ग्रामे कः आसीत् ?

2) सः कथं दिनानि यापयतिस्म ?

3) सः कदाचित् क्षेत्रे किं दृष्टवान् ?

4) सः कृषकः किं चिन्तितवान् ?

5) सः किम् आनीय वल्मीकस्य पुरतः स्थापयति ?

AECC – 4.2

I Semester B.Sc. Examination, May/June 2022
(NEP Scheme)
HINDI LANGUAGE
Paper – I : Kahani Aur Vyakaran/Sankshepan

Time : 2½ Hours Max. Marks : 60

I. निम्नलिखित प्रश्नों के उत्तर **एक** शब्द या वाक्यांश में लिखिए। **(10×1=10)**

1) धन किसका ईंधन है ?

2) साधु के कितने बच्चे थे ?

3) आवश्यकताओं ने किसे बहुत शीघ्र चतुर बना दिया था ?

4) 'झाँकी' कहानी के लेखक कौन है ?

5) घोडे के लिए सरकारी रेट कितने रुपए थे ?

6) तीसरे दिन लेखक के कमरे से क्या गायब हो गया था ?

7) बाबू राधाकृष्ण की बेटी का नाम क्या था ?

8) सीताराम के कितने बच्चे है ?

9) मंजव्वा की बेटी का नाम क्या है ?

10) गोपाल नंबोदरी कौन है ?

II. किन्हीं **दो** के संदर्भ सहित व्याख्या कीजिए। **(2×7=14)**

1) ''महाराज यदि साधु-संतों की सेवा न की तो इस मनुष्य देह से क्या लाभ ही क्या ?''

2) ''बाबूजी नमस्ते आप कहिए तो खेल दिखाऊँ ?''

3) ''विवाह की बात तो पीछे होगी। क्या रूप-रंग बहुत खराब है ?''

III. 'पुनर्जन्म' कहानी का सारांश लिखकर उसकी विशेषताओं पर प्रकाश डालिए। **(1×16=16)**

अथवा

'माँ मुझे स्कूल जाना है' कहानी के आधार पर लक्ष्मी एवं हेडमास्टर का चरित्र-चित्रण कीजिए।

P.T.O.

IV. किसी **एक** पर टिप्पणी लिखिए। (1×5=5)

1) गौरी

2) द्वारकानाथ।

V. प्रयोजन मूलक हिन्दी–किन्हीं **दो** का उत्तर लिखिए। (2×4=8)

1) प्रतिवेदन की विशेषताएँ लिखिए।

2) आलेखन की विशेषताएँ लिखिए।

3) टिप्पण का उद्देश्य या महत्व को लिखिए।

VI. उचित शीर्षक देते हुए **एक तिहाई** शब्दों में संक्षेपण कीजिए। (1×7=7)

मनुष्य को अपने जीवन में कुछ न कुछ उद्देश्य रखना–चाहिए। उद्देश्य के बिना जीवन अर्थहीन हो जाता है। किसान सीधा–सादा सरल, पवित्र और मेहनती होता है। किसान को अपनी मेहनत करने के साथ–साथ देश की सेवा भी करनी है।

प्रत्येक मनुष्य के जीवन में उद्देश्यहीन मनुष्य बिना परिवार की नाव की तरह है। विभिन्न मनुष्य के विभिन्न उद्देश्य होते है। बहुत लोग धन कमाना चाहते है और धन कमाना ही उनका उद्देश्य बन जाता है। कुछ लोग केवल आनंद चाहते है तुम उन्हें योग्य और सफल किसान बनाने का उद्योग कर सकते है।

DCFS – 101

First Semester B.Sc. Degree Examination, May/June 2022
(NEP Scheme)
CRIMINOLOGY AND FORENSIC SCIENCE
Introduction to Forensic Science

Time : 2½ Hours | Max. Marks : 60

PART – A

Answer **any 6** questions. **Each** question carries **1** mark. (6×1=6)

1. Define Mahazaar.
2. What is oral evidence ?
3. Define Forensic Ballistics.
4. What is Locard's Principle of Exchange ?
5. What is computer forensics ?
6. Define Narcotic Unit.
7. What is Central Reserve Police Force ?
8. What is the role of Dog squad ?

PART – B

Answer **any 6** questions. **Each** question carries **2** marks. (6×2=12)

9. What are the qualifications of Forensic Scientists ?
10. Explain the code of conduct for forensic scientist.
11. Explain digital and cyber forensics.
12. What is questioned document examination ?
13. What is Forensic physics and its importance in forensic science ?

P.T.O.

14. What are the functions of forensic chemistry ?

15. Explain central detective training school.

16. What is the role of National Police Academy ?

PART – C

Answer **any 3** questions. **Each** question carries **4** marks. **(3×4=12)**

17. Explain the steps involved in report writing.

18. Explain the contribution of Sir Edgar Hoover through the FBI ?

19. What are the scientific kits available in mobile forensic lab ?

20. Explain the role of CBI and FBI.

PART – D

Answer **any 5** questions. **Each** question carries **6** marks. **(5×6=30)**

21. Explain the principle of Forensic Science.

22. What is the definition, scope, need and functions of forensic science ?

23. Explain the branches of forensic science.

24. What is the history of Forensic Science ?

25. Explain about the branches of Forensic Science laboratories.

26. Explain Central, State and Regional forensic science laboratories.

27. Explain the role of BPR&D.

28. Explain the functions and hierarchical set up of law enforcement agencies.

DCFS – 102

I Semester B.Sc. Degree Examination, May/June 2022
(NEP)
CRIMINOLOGY AND FORENSIC SCIENCE
Basic Forensic Chemistry

Time : 2½ Hours Max. Marks : 60

Instructions : *1) The question paper has **4** Parts. Answer **all** the **four** Parts.*
*2) Draw diagrams **wherever** necessary.*

PART – A

Answer **any six** of the following questions. **Each** question carries **one** mark. **(6×1=6)**

1. Define normality.
2. What is bond order ?
3. Give one use for neon.
4. What are f-block elements ?
5. What is meant by tetravalency of carbon ?
6. Define hybridization.
7. Give an example for a complexometric titration.
8. What is standard solution ?

PART – B

Answer **any six** of the following questions. **Each** question carries **two** marks. **(6×2=12)**

9. Define formal charge.
10. Define :
    i) Change in internal energy
    ii) Entropy.
11. Write a note on acidic corrosives.
12. What is lanthanide contraction ?
13. Specify the hybridization of carbon in the following molecules.
    i) CH_4 ii) C_2H_4
    iii) C_2H_2 iv) C_2H_6

P.T.O.

14. Write the IUPAC names of the following molecules.
    i) $CH_3 - CH(OH) - CH = CH - CH_3$
    ii) $CH_3 - CH_2 - CH_2 - CHO$

15. Explain the term Seeding of crystallisation.

16. What is the principle of gravimetric analysis ?

PART – C

Answer **any three** of the following questions. **Each** question carries **four** marks. **(3×4=12)**

17. Give any four differences between Sigma and Pi bonds.

18. Explain any two properties each for anomalous behaviour of beryllium and its diagonal relationship with Aluminium.

19. Explain substitution reaction with an example.

20. Briefly explain electro gravimetric analysis.

PART – D

Answer **any five** of the following questions. **Each** question carries **six** marks. **(5×6=30)**

21. What is hydrogen bonding ? Explain its types with examples.

22. What is an ionic bond ? Explain the formation of ionic bond with illustration.

23. a) Give any two differences between order and molecularity. 2

    b) Define pseudo first order reaction. Give an example. 2

    c) Explain (i) Isotopes (ii) Isobars with an example. 2

24. Discuss the classification of elements into s, p, d and f block elements.

25. What are polymers ? Explain addition and condensation polymers with examples.

26. Explain the classification of organic compounds with one example for each class.

27. Explain distillation and fractional distillation with neat diagram.

28. What are titrimetric analysis ? Briefly explain its classification.