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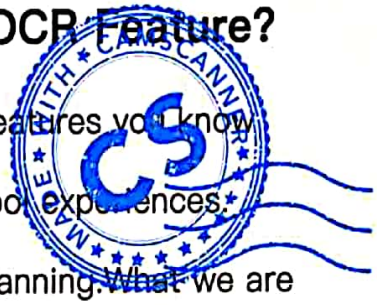

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36302(New)

B.Sc./B.C.A. III - Semester (CBCS) Degree Examination, Nov./Dec. - 2018

KANNADA (Basic)

ಸಂಕ್ರಾಂತಿ (ನಾಟಕ) ಮತ್ತು ಕರ್ವಾಲೋ (ಕಾದಂಬರಿ)

Paper - III

(New)

Time : 3 Hours **Maximum Marks : 70**

Instructions to Candidates:

ಭಾಷೆ ಹಾಗೂ ಬರಹದ ಶುದ್ಧಿಗೆ ಗಮನ ಕೊಡಲಾಗುವುದು.

1. a) ಬಿಜ್ಜಳನ ಅಧಿಕಾರ ಉಳಿಯಬೇಕೆಂದರೆ ರುದ್ರನ ತಲೆದಂಡ ಆಗಲೇಬೇಕಿತ್ತು. ಏಕೆ ? **(10)**

(ಅಥವಾ)

b) ಬಸವಣ್ಣನವರ ಬೋಧನೆಗಳನ್ನು ಉಜ್ಜ ಏಕೆ ಒಪ್ಪಿಕೊಳ್ಳಲಿಲ್ಲ ?

2. a) ರುದ್ರನು ಉಷಾಳ ಮೇಲೆ ಅತ್ಯಾಚಾರ ಮಾಡಿದನೆ ? ಅವಳು ಹೌದು ಎಂದು ಹೇಳಲು ಕಾರಣವೇನು ? **(10)**

(ಅಥವಾ)

b) ಬಿಜ್ಜಳನು ಬಸವಣ್ಣನವರಿಗೆ ಯಾವ ಪ್ರಶ್ನೆಗಳನ್ನು ಕೇಳಿದನು ?

3. a) ಕರ್ವಾಲೋ ಕಾದಂಬರಿಯಲ್ಲಿ ಬಂದ ಜೇನಿನ ವಿವರಗಳನ್ನು ಸಂಗ್ರಹಿಸಿ ಬರೆಯಿರಿ. **(10)**

(ಅಥವಾ)

b) ಹುಡುಕಾಟದ ನಂತರ ಹಾರುವ ಓತಿಯನ್ನು ಮೊದಲು ಯಾರು ಕಂಡರು ? ಆ ಪ್ರಸಂಗವನ್ನು ವಿವರಿಸಿ.

4. a) ಮಂದಣ್ಣ ಯಾರು ? ಅವನ ಮೇರೇಜು ಹೇಗೆ ನಡೆಯಿತು ? **(10)**

(ಅಥವಾ)

b) ಕರ್ವಾಲೋ ಏಕೆ ಮಂದಣ್ಣನನ್ನು ಅಷ್ಟೊಂದು ಪ್ರೀತಿಸುತ್ತಿದ್ದರು ?

5. a) ರುದ್ರನು ತನ್ನ ಕೇರಿಯ ಜನರನ್ನು ಶರಣರನ್ನಾಗಿ ಪರಿವರ್ತಿಸಿದನೆ ? **(05)**

(ಅಥವಾ)

b) ಉಜ್ಜನು ತನ್ನ ಸೊಸೆಯನ್ನು ಹೇಗೆ ವರ್ಣಿಸಿದನು ?

[P.T.O.

6. a) ಆಗಸ್ಟ್ 15 ರಂದು ಜೇನು ಏಳಲು ಯಾರು ಕಾರಣ ? ಅದರ ಆಪಾದನೆ ಯಾರ ಮೇಲೆ ಬಂತು ? (05)

(ಅಥವಾ)

b) ಪ್ರಭಾಕರನ ಪಾತ್ರವನ್ನು ಕುರಿತು ಬರೆಯಿರಿ.

7. ಈ ಕೆಳಗಿನ ಎಂಟು ವಿಷಯಗಳಲ್ಲಿ ನಿಮಗೆ ಬೇಕಾದ ಯಾವುದಾದರೂ **ನಾಲ್ಕಕ್ಕೆ** ಮಾತ್ರ ಟಿಪ್ಪಣಿ ಬರೆಯಿರಿ. (4×5=20)

a) ಚೌಡವ್ವ

b) ಕಿವಿ

c) ಸಂಕ್ರಾಂತಿಯ ದಿನ

d) ವಕೀಲ ಗೊನ್‌ಸಾಲ್ವೆಸ್

e) ಕೆಂಚ

f) ನಾರ್ವೆ ರಾಮಯ್ಯ

g) ಉಮಾ-ಸುಮಾ-ರಮಾ

h) ಹಾವುಗೊಲ್ಲರ ಎಂಗ್ಟ

35310

B.A/B.Sc./B.Com./B.B.M/B.S.W/B.C.A/G.M.T. III - Semester

Degree Examination, Nov./Dec. - 2018

ADDITIONAL ENGLISH

(CBCS - 2016-17)

Time : 3 Hours

Maximum Marks : 70

Texts:

1. English for students of commerce.
2. Some selected plays.

I. Answer any **THREE** of the following : **(3×14=42)**

a) What are the ways suggested by Roger - Von Oech to unlock your own creativity?

b) What are the false promises made through advertisements and how the author wants them to leave that profession?

c) What are the qualities of a good entrepreneur.

d) How does the poet describe the common man in the poem "The Unknown Citizen".

II. Answer any **TWO** of the following : **(2×14=28)**

a) Describe the meeting between the Bishop and the convict in the play, 'The Bishop's candlesticks'.

b) Bring out the humour in the play 'The Dear Departed'.

c) Sketch the character of corporal Gregory Brewster.

39303

B.Sc./B.C.A. III - Semester (CBCS) Degree Examination, Nov./Dec. - 2018

HINDI (Basic)

Study of Indian language

Paper -III

Time : 3 Hours Maximum Marks : 70

सूचना : लिखावट शुध्द और देवनागरी लिपि में हों।

पठित पुस्तकें : 1) कामना नाटक 2) व्यवसायिक संप्रषण।

1. किन्हीं दो की संदर्भ सहीत व्याख्या कीजिए। (2×7=14)

a) यह! अरे इसकी तो टांग सड गयी है, भयानक रोग है, इसको काटकर अलग कर देना होगा।

b) तो तू ही वह व्यक्ति है, जिसने बहुत-से घायलों को पास की अमराई में इकटा कर रखा है और उसकी सेवा करता है।

c) यदि राजकीय शासन का अर्थ हत्या और अत्याचार है, तो मैं व्यर्थ रानी बनना नहीं चाहती। मेरी प्रजा इस बर्बरता स जितना शीघ्र छुटि पावे, उतना ही अच्छा।

2. किन्हीं दो प्रश्नों के उत्तर लिखिए। (2×10=20)

a) 'कामना' नाटक का सार अपने वाक्यों में विस्तार से लिखिए।

b) 'जयशंकर प्रसाद' जी अपने नाटक के माध्यम से हमें क्या संदेश देना चाहते है।

c) भारतीय संस्कृती की रक्षा 'कामना' नाटक में कैसे की गयी है समझाइए।

3. किन्हीं दो प्रश्नों का उत्तर लिखिए। (2×10=20)

a) संप्रेषण क्या है? मौखिक संप्रेषण पर विस्तार से लिखिए।

b) व्यवसायिक पत्रों के कार्यों पर प्रकाश डालिए।

c) पत्र किसे कहते हैं? उसके प्रकार कितने हैं?

[P.T.O

4. किन्हीं **दो** पत्रों को लिखिए। (2×5=10)

a) आप के गली में चार दिन से पीनेका पानी नहीं आया है। मुनसिपाल्टी को एक सिकायती पत्र लिखिए।

b) कार्पोरेशन बैंक में आप नया खाता खुलवाने के लिए मुख्य प्रबंधाधिकारी को एक पत्र लिखिए।

c) अपने भाई के शादी में भाग लेने के लिए अपने मित्रों को एक पत्र लिखिए।

5. किन्हीं **दो** प्रश्नों के उत्तर लिखिए। (2×3=6)

a) काल के भेदों पर प्रकाश डालिए।

b) प्रत्यय की परिभाषा बताते हुए, तीन प्रत्ययों को लिखिए।

c) लिंग परिवर्तन के नियमों को समझाइए।

24321(New)

B.Sc. III - Semester Degree Examination, Nov./Dec. - 2018

PHYSICS

Electricity, Vector Analysis and Electromagnetic Theory

Paper - III

(New)

Time : 3 Hours Maximum Marks : 80

Instructions to Candidates:

Write answers to section - A questions in the first two pages only.

SECTION - A

Answer the following : **(15×1=15)**

1. What is capacity reactance?
2. Name the color codes of the resister having resistance value 1200 ±10%.
3. State Kirchoff's voltage law.
4. Write the expression for quality factor of a LCR series circuit.
5. Write the expression for cut off frequency air case of low pass filter.
6. What is CRO?
7. Define charge sensitivity of a moving coil galvanometer.
8. Give an example for vector product of two vectors.
9. What is peltier effect?
10. What is a Thermocouple?
11. State stoke's theorem?
12. State Ampere's circuital law.
13. Write the expression for velocity of electromagnetic waves in vacuum.
14. What is displacement current?
15. What is a band pass filter?

P.T.O.

SECTION - B

Answer any **Five** of the following : (5×5=25)

16. Define and write the expressive for resistance, inductance and capacitance.
17. Obtain the expression for impedance of RL circuit.
18. Obtain the expression for Thermo emf.
19. Explain the construction and working of a CRO.
20. Give the theory of Helmholtz Galvanometer.
21. What is divergence of a vector field function and give its physical significance.
22. Describe Hertz experiment to produce electromagnetic waves.

SECTION - C

Answer any **Four** of the following : (4×10=40)

23. a) Explain the procedure for finding Thevenin's equivalent circuit.
    b) Prove Ampere's circuital law in the case of current enclosed by the closed path. (5+5)
24. a) Derive the expression for current and impedance in LCR series circuit and also draw Phasor diagram.
    b) A circuit contains resistance of 50Ω, inductance of 0.2 H and capacitance of 30×10^{-3}F. An AC source of 200 V and 50 Hz is connected in series calculate the current. (7+3)
25. a) Explain the theory of Maxwells bridge to determine the self inductance of a coil.
    b) Explain the working of low pass filter. Derive an expression for the cutoff frequency. (5+5)
26. a) Obtain the expression for electric intensity at a point outside the charged hollow sphere using Gauss theorem.
    b) Write Maxwells equations in differential form. (5+5)
27. a) Show that curl curl f = $grad\ div f - \nabla^2 f$.
    b) Show that the vector $f = (\sin y + z)i + (x\cos y - z)j + (x - y)k$ is irrotational. (6+4)
28. a) Explain how voltage, current and frequency are measured using CRO.
    b) Derive an equation for the propagation of Plane Electro Magnetic waves in free space (5+5)

36321

B.Sc. III Semester (CBCS) Degree Examination, Nov./Dec. - 2018

PHYSICS

Electricity, Vector Analysis and Electromagnetic Theory

Paper - III

Time : 3 Hours | Maximum Marks : 70

Instructions to Candidates:

Write answers to section - A questions in the first two pages only.

SECTION - A

Answer the following : **(15×1=15)**

1. Name the colour codes of a resistor having resistance value 3.4 K ±10%.
2. State Kirchoff's voltage law.
3. What is Wattless current?
4. In which circuit the current leads with the applied voltage by 90°.
5. The Value of L,C, R for a circuit are 2H, 18F and 5 Ω. Calculate the quality factor.
6. The peak value of AC is 1.414 A what is its rms value?
7. What is the function of an electron gun in CRO?
8. Find the divergence of the vector $\overline{A} = xi + yj + zk$.
9. Write the poisson's equation in vector notation.
10. Give the relation between charge sensitivity and current sensitivity of a Ballistic galvanometer.
11. Write the expression for velocity of electromagnetic waves in vacuum.

|P.T.O

12. What is meant by displacement current?

13. How does the reactance of an inductor change if frequency of A.C is increased?

14. State Biot - Savart's law.

15. State stoke's theorem.

SECTION - B

Answer any **FIVE** of the following : (5×5=25)

16. State and prove Norton's theorem.

17. Define and explain the following

    1) Resistance

    2) Inductance

    3) Capacitance.

18. Obtain the expression for impedance in a RL series circuit with J - notation. Draw the phasor diagram.

19. Explain the construction and working of CRO.

20. Write a note on Poynting theorem.

21. State Ampere's circuital law when the closed path encloses a current carrying conductor.

22. What is low pass filter? Explaining the working of RC low pass filter and obtain the expression for cut - off frequency.

SECTION - C

Answer any **THREE** of the following : (3×10=30)

23. a) Obtain the expression for frequency $f = \frac{1}{2\pi}\sqrt{\frac{1}{LC} - \frac{R^2}{L^2}}$ in parallel resonant circuit when inductance has some resistance.

b) If the applied voltage is 220 V, 50 Cps. The inductance of the coil is 0.8H, resistance of the coil is 50Ω and the capacitance of the capacitor is $8\mu F$, find the current in the circuit. (7+3)

24. a) Explain the theory of Maxwell's bridge to determine the self - inductance of a coil.

b) Explain how voltage, current frequency and phase of a signal are measured using CRO. (5+5)

25. a) Show that curl curl F = grad div $F - \nabla^2 F$.

b) Give the physical significance of divergence of a vector field function. (6+4)

26. a) Give the theory of moving coil galvanometer.

b) The current sensitivity of a BG is 2.2×10^{-9} amp. for a deflection of 1mm on a scale kept at a distance of 1m. Calculate the charge sensitivity of the galvanometer if the time period of the coil is 6.2 second. (7+3)

27. a) Write the Maxwell's equations in differential form. Explain the physical significance of each equation.

b) Describe Hertz experiment to produce electromagnetic waves. (5+5)

B.Sc. III - Semester (CBCS) Degree Examination, Nov./Dec. - 2018

CHEMISTRY

Paper - III

(New)

Time : 3 Hours

Maximum Marks : 70

Instructions to Candidates:

1. Section A contains questions from all sections.
2. Section B - contains questions from inorganic chemistry.
   Section C - contains questions from organic chemistry.
   Section D - contains questions from physical chemistry.
3. Answer all the four sections

SECTION - A

Answer any **Ten** of the following : **(10×1=10)**

1. How many 'd' electrons are in Cr?
2. Which transition element of second group has maximum oxidation state?
3. Which among Ce^{3+} and Gd^{3+} has bigger size?
4. Classify BF_3, NH_3, Cl^- and Zn^{2+} as Lewis acids and bases.
5. Give an example for vicinal dihalide.
6. What is the product of oxidation of a secondary alcohol?
7. Which position of the nitro group makes the phenol more acidic?
8. Which is stronger?
   a) α - chloropropionic acid
   b) β - chloropropionic acid

[P.T.O

9. Write BET equation.

10. Define third law of thermodynamics.

11. Define plancks radiation law.

12. Write the Nernst distribution law for molecular association.

SECTION - B

Answer any **two** of the following : (2×10=20)

13. a) Discuss the comparative treatment of elements of second and third transition series with their analogues of first transition series with respect to

    a) Ionic radii.

    b) Oxidation states

    c) Magnetic properties.

    b) Explain the color of the first transition metal complexes on the Basis of crystal field theory. (6+4)

14. a) Discuss the separation of lanthanides by ion exchange method.

    b) Compare the properties of lanthanides with actinides. (6+4)

15. a) Define HSAB principle. Give the characteristic properties of Hard and soft acids and bases.

    b) Define Lux - flood concept of acids and bases. Explain with examples. (6+4)

SECTION - C

Answer any **two** of the following : (2×10=20)

16. a) Explain the mechanism and formation of t-Butyl alcohol from t - Butyl Bromide.

    b) Discuss the preparation of aryl halides from phenols and diazonium salts. (6+4)

17. a) Explain the mechanism of Reimer - Tiemann reaction.

    b) Explain the mechanisms pinacol - pinacolone reaction. (6+4)

18. a) Give any **two** preparation and properties of

i) acetyl chloride

ii) acetamide.

b) Give any three preparations of carboxylic acids. **(6+4)**

SECTION - D

Answer any **two** of the following : **(2×10=20)**

19. a) Discuss Carnot's cycle.

b) Define third law of thermodynamics and explain the Nernst heat theorem. **(6+4)**

20. a) Derive the Longmuir's mono layer adsorption isotherm.

b) Derive the expression for the molecular dissociation of the solute in one of the solvent. **(6+4)**

21. a) Define and explain photo electric effect.

b) Explain De-Broglie hypothesis. **(6+4)**

24322(New)

B.Sc. III - Semester Degree Examination, Nov./Dec. - 2018

CHEMISTRY

PAPER : III

(New)

Time : 3 Hours **Maximum Marks : 80**

Instructions to Candidates:

1. Section A contains questions from all Sections.
2. Section B contains questions from Inorganic chemistry, Section C contains questions term Organic Chemistry and Section D contains questions from physical chemistry.
3. Answer **all** the Sections.

SECTION-A

Answer any **TEN** of the following. **(10×2=20)**

1. Why cupric salts are blue and cuprous salts are colorless?

2. Which among Mn^{2+} and V^{2+} has higher magnetic moment?

3. Why Ce^{3+} is more basic than Ce^{4+}.

4. Define Lux flood concept of acids and bases.

5. How toluene is prepared from Chlorobenzene? Name the reaction.

6. Name the following in IUPAC system.

a) Iso propyl alcohol

b) Sel-Butyl alcohol.

7. Give an example each for dihydric and trihydric phenol.

8. Give HVZ reaction.

[P.T.O.

9. Define the Rayleigh and Jeans equation.

10. Calculate the residual entropy of CO.

11. What is the effect of temperature and pressure on adsorption?

12. Write the partition coefficient for the solute dissociation in one of the solvent.

SECTION-B

Answer any **TWO** of the following. (2×10=20)

13. a) Discuss the variation of oxidation states and Ionization energies of third transition series. (6)

b) Explain the factors contributing to catalytic action of transition elements and give any two examples. (4)

14. a) What is lanthanide contraction? Explain the cause and its consequence on electro negativity and basicity of the oxides and hydroxides. (6)

b) Discuss the colours exhibited by actinide ions in aqueous solution. (4)

15. a) What is levelling effect? Explain the effect of solvents acetic acid and water on the strength of $HClO_4$, HBr, H_2SO_4, HCl and HNO_3. (6)

b) Explain the expected trends in the relative acid strength of $HClO_4$, $HBrO_4$, and HIO_4. (4)

SECTION-C

Answer any **TWO** of the following. (2×10=20)

16. a) How t-butyl bromide can be converted into t-butyl alcohol? Give the mechanism. (6)

b) Give the preparations of arylhalids from diazonium salts and by direct halogenation. (4)

17. a) Discuss the mechanism of Reimer-Tie Mann reaction. (6)

b) Discuss the mechanism of pinacol-pinacolone rearrangement. (4)

18. a) Give any three preparation and properties of mono carboxylic acids. (6)

b) Discuss the effect of substituents on the acid strength of the mono carboxylic acids. (4)

SECTION-D

Answer any TWO of the following. (2×10=20)

19. a) Define and explain Compton effect. (6)

b) Define and explain photo electric effect. (4)

20. a) Derive Gibb's Helmholtz equation. (6)

b) State and explain Carnot's theorem. (4)

21. a) Derive Langmuir's adsorption Isotherm. (6)

b) Derive the Partition coefficient for the association of the solute in one of the solvents. (4)

30323(New)

B.Sc. III - Semester Degree Examination, Nov./Dec. - 2018

MATHEMATICS

Algebra - III

Paper - V & 3.1

(New)

Time : 3 Hours

Maximum Marks : 60

Instructions to Candidates:

Answer **All** sections.

Section - A

Answer any **ten** of the following : **(10×2=20)**

1. Define a Division Ring and give an example of a commutative ring with unity.

2. In a Ring $(R,+,\bullet)$ $\forall a,b \in R$ then prove that a(-b) = (-a) b = -(ab).

3. Show that the set $S=\left\{\begin{pmatrix} a & 0 \\ b & c \end{pmatrix}; a,b,c \in z\right\}$ is a subring of the ring $M_2(z) \forall$ 2×2 matrices over set of integers.

4. Let R be a ring and 'a' be a fixed element of R show that $Ra=\{x \in R; ax=0\}$ is a subring of R.

5. Define Right ideal and give example.

6. Let $(z,+,\bullet)$ be the ring of integer define $\phi: z \to z$ by $\phi(x)=x \forall x \in z$ then show that $\phi: z \to z$ is homomorphism.

7. In a vector space v over the field F show that $c_1\alpha = c_2\alpha$ and $\alpha \neq 0 \Rightarrow c_1 = c_2$.

[P.T.O

8. Is the subset $W = \{(x_1, x_2, x_3) / x_1^2 + x_2^2 + x_3^2 \leq 0\}$ of $V_3(R)$ is a subspace of $V_3(R)$?

9. Express the vector (1,-2,5) as a linear combination of the vectors (1,1,1) (1,2,3) and (2,-1,1).

10. Determine whether the set {(1,2,1), (3,4,-7), (3,1,5)} is a basis of $V_3(R)$.

11. Is there a linear map $T : R^2 \to R^2$ for which T (2,2) = (4,-6) and T(5,5) = (2,-3) ?

12. Define Rank of linear transformation.

Section - B

Answer any **Three** of the following : (3×5=15)

13. If $(R, +, \cdot)$ is a system satisfying all the conditions for a ring with unity '1' except a+b=b+a show that the condition a+b=b+a also holds in R and hence R is a ring.

14. A non empty subset S of a ring R is a subring of R iff

    i) S+(-S)=S

    ii) $SS \subseteq S$

15. If $f : R \to R'$ is an isomorphism of rings then prove that

    1) isomorphic image of a commutative ring is a commutative ring.

    2) isomorphic image of a ring with unity is a ring with unity.

    3) Isomorphic image of an integral domain is an integral domain.

16. Find all the principle ideal of the ring R = {0,1,2,3,4,5} w.r.t addition modulo 6 and multiplication modulo 6.

Section - C

Answer any **Three** of the following : (3×5=15)

17. In any vector space V over a field F

    1. $C.O = O \forall C \in F$

2. $0.\alpha = 0 \forall \alpha \in V$

3. $(-C)\alpha = -(C\alpha) = C(-\alpha) \forall C \in F, \forall \alpha \in V$

18. Show that the subset $W = \{(x, y, z) / x - 3y + 4z = 0\}$ of the vector space $V_3(R)$ is a subspace of $V_3(R)$.

19. Let S be a non empty subset of a vector space V[F]. Then

1) L[S] is a subspace of V

2) $S \subseteq L[S]$

3) L[S] is the smallest subspace of V containing S.

20. Show that the vectors (1,1,2,4), (2,-1,-5, 2), (1,-1,-4,0) and (2,1,1,6) are linearly dependent in R^4 and extract a linearly independent subset. Also find the dimension and a basis of the subspace spanned by them.

Section - D

(2×5=10)

Answer any **Two** of the following :

21. Find the linear transformation $f : R^2 \to R^2$ such that f(1,1) = (0,1) and f(-1,1) = (3,2).

22. Find the matrix of the linear transformation $T : V_2(R) \to V_3(R)$ defined by T(x,y) = (x+y, 3x-y) with respect to relative bases. $B_1 = \{(1,1), (3,1)\}$; $B_2 = \{(1,1,1), (1,1,0), (1,0,0)\}$.

23. Let $T : V \to W$ be a linear transformation defined by T(x,y,z) = (x+y, x-y, 2x+z) Find the range null space rank, nullity and hence verify the rank - nullity theorem.

30353(New)

B.Sc. III - Semester Degree Examination, Nov./Dec. - 2018

MATHEMATICS - VI

Differential Equations - I

Paper - 3.2

(New)

Time : 3 Hours Maximum Marks : 60

Instructions to Candidates:

Answer **ALL** sections.

Section - A

Answer any **Ten** of the following : **(10×2=20)**

1. Find the order and the degree of the equation $\left[1+\left(\frac{dy}{dx}\right)^2\right]^{3/2}=\frac{d^2y}{dx^2}$.

2. Verify that y = a cosx is the solution of the equation $\frac{dy}{dx}+y\tan x=0$.

3. Solve : $\frac{dy}{dx}=\sqrt{\frac{(1-y^2)}{(1-x^2)}}$.

4. Show that the equation : (2x+y+1) dx + (x+2y+1) dy is exact and hence solve.

5. Solve : $\left(D^4-2D^3+2D^2-2D+1\right)y=0$.

6. Solve : $\left(D^3+1\right)y=0$.

7. Find the orthogonal trajectories of the family of parabola $y^2=4ax$.

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8. Solve : $p^2 - 13p + 42 = 0$.

9. Define second order linear differential equation and write in the standard form.

10. Find the general solution of the equation.

$(a^2 - x^2)P^2 + 2xyP + b^2 - y^2 = 0$.

11. Show that the equation :

$x^2 \frac{d^2y}{dx^2} + \frac{dy}{dx} - 2y = 0$ is exact.

12. Find the part of complementary function of $x \frac{d^2y}{dx^2} - (2x+1)\frac{dy}{dx} + (x+1)y = x^2e^x$.

Section - B

Answer any **Three** of the following : (3×5=1

13. Solve : $Sin^{-1}\left(\frac{dy}{dx}\right) = x + y$.

14. Determine suitable integrating factor and solve. $(x^2 + y^2 + x)dx + xydy = 0$.

15. Solve the equation for y $y + px = x^4p^2$.

16. Find the general solution of the equation (px-y) (py+x) = a^2p by using transformatio $x^2 = u$ and $y^2 = v$.

17. Solve : $e^y\left(\frac{dy}{dx} + 1\right) = e^x$.

Section - C

Answer any **Three** of the following : (3×5=1

18. Solve : $(D+2)(D-1)^2 y = e^{-2x} + 2\sinh x$.

19. Solve : $(1+2x)^2\frac{d^2y}{dx^2}-6(1+2x)\frac{dy}{dx}+16y=8(1+2x)^2$.

20. Solve : $\frac{dx}{dt}+x=y+e^t$,

$\frac{dy}{dt}+y=x+e^t$

21. Show that the family of curves $x^3-3xy^2=c_1$ and $y^3-3x^2y=c_2$ are orthogonal trajectories of each other.

22. Verify the condition of integrability and solve $(2y-z)dx+4dy-2dz=0$.

Section - D

Answer any **Two** of the following : **(2×5=10)**

23. Solve $\frac{d^2y}{dx^2}+(1-\cot x)\frac{dy}{dx}-y\cot x=\sin^2 x$ by finding the part of C.F.

24. Solve $\cos x\frac{d^2y}{dx^2}+\sin x\frac{dy}{dx}-2y\cos^3 x=2\cos^5 x$ by changing the independent variable.

25. Solve $\frac{d^2y}{dx^2}-2\tan x\frac{dy}{dx}+5y=(\sec x)e^x$ by reducing it to normal form.

26. Verify that the equation $x^2y''+3xy'+y=\frac{1}{(1-x)^2}$ $0<x<1$ is a exact and solve it.

36324(New)

B.Sc. III - Semester (CBCS) Degree Examination, Nov./Dec. - 2018

BOTANY

(Plant Histology, Anatomy, Embryology And Palynology)

Paper - 3.1

(New)

Time : 3 Hours

Maximum Marks : 70

I. Answer the following questions: (15×1=15)

1. Name the innermost layer of cortex.
2. Mention the two types of lateral meristems in plants.
3. Define term "Plerome".
4. What are latex cells? Give an example.
5. Name the cementing material found cell of Sclerenchyma.
6. What is Amphivasal type of vascular bundle?
7. What is Alburnum?
8. Define orthotropous ovule.
9. What is Amoeboid tapetum? Give an example.
10. What are Stone cells? Mention its function.
11. What is Pollen kitt? Mention its function.
12. What is Xenogamy?
13. Define the term "cleavage polyembryony".
14. What is the functional unit of male gametophyte?
15. What is Chiropterophily?

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II. Answer any **Five** of the following questions. (5×5=25)

16. What is simple permanent tissue? Explain the different types of sclerenchyma.
17. What are laticiferous tissues? Explain different types.
18. Explain the Histogen theory of shoot apical meristem.
19. Describe the T.S of Monocot root with neat labeled diagram.
20. What is megasporangium? Explain the formation of megaspores with neat labeled diagram.
21. Explain the wall layers of pollen grains and their significance in palynology.
22. What is Monosporic embryosac? Explain the development of polygonum type of embryosac.

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

23. What are meristems? Explain the tunica - corpus theory of apical meristem.
24. Describe the T.S of Dicot leaf with neat labeled diagram.
25. Explain the Microgametogenesis with neat labeled diagram.
26. What is secondary growth? Explain the Secondary growth in dicot stem with neat labeled diagram.
27. What is cross pollination? Explain the different agents of cross pollination.

36325

B.Sc. III Semester (CBCS) Degree Examination, Nov/Dec - 2018

ZOOLOGY

Economic Zoology and Histology

Paper - Z - 3

Time : 3 Hours | Maximum Marks : 70

Instructions to Candidates:

1. Answer **all** questions.
2. Draw neat labelled diagrams wherever necessary.

SECTION - A

Answer any **FIVE** of the following in **ONE** or **TWO** sentences each. **(5×2=10)**

1. What is sting apparatus? Write its function.
2. Define polyculture. Write its importance.
3. What is pebrine disease? Name the causating agent.
4. What is In Vitro - Fertilization?
5. Mention the types of papillae of human tongue.
6. What are interstitial cells of leydig? Write its function.
7. Expand MSH, LTH, TSH and ACTH.

SECTION - B

Part - A

Answer any **FOUR** of the following in brief: **(4×5=20)**

8. Write a brief note on nutritive value of honey.
9. Explain briefly about cattle improvement programmes.

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10. Write a short note on methods of pearl culture.

11. Discuss briefly about nutritional deficiency diseases of fowls.

12. Write a brief note on sericulture by products.

Part - B

Answer any **TWO** of the following : (2×5=10)

13. Explain the structure of T.S. of Thyroid gland of mammal with the help of neat labelled diagram.

14. Explain the T.S of liver of a mammal with the help of neat labelled diagram.

15. Write a note on functions of papillae of human tongue.

SECTION - C

Part - A

Answer any **TWO** of the following in detail. (2×10=20)

16. Describe the morphology of Bombyx Mori and rearing equipments of sericulture.

17. Write a detailed note on techniques of fisheries culture and its importance.

18. Discuss the scope and management of poultry farming.

Part - B

Answer any **ONE** of the following : (1×10=10)

19. Illustrate the T.S of small intestine of mammal with the help of neat labelled diagram.

20. Describe the C.S of mammalian ovary with the help of neat labelled diagram.

39321

B.C.A/B.Sc III - Semester (CBCS) Degree Examination, Nov/Dec - 2018

COMPUTER SCIENCE

Computer Applications / Computer Fundamentals

(Compulsory)

Time : 3 Hours Maximum Marks : 70

SECTION - A

I. Answer **ALL** the questions. Each question carries **2** marks. **(10×2=20)**

1. What is Boolean Algebra? Who introduced it?
2. Add 100011101 and 11001010 using binary addition rules.
3. Define linker and loader.
4. What is a translator? What is the use of it?
5. Define topology? Name any two topologies.
6. What is data transmission? Write the difference between serial and parallel transmissions.
7. Write any two internet services.
8. Write the difference between traditional commerce and e-commerce.
9. What is a web page and web site?
10. Expand HTML and JPEG.

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SECTION - B

II. Answer any **FOUR** questions. Each question carries **5** marks. (4×5=

11. Convert the following

    a) $3265.13_{(8)} = ?_{(10)}$

    b) $FACE.ABC_{(16)} = ?_{(8)}$

12. Explain the principle of duality theorem.

13. Write the differences between compiler and interpreter.

14. Explain the different types of computer networks.

15. Write the steps for creating and sending an email.

16. Explain the basic structure of HTML program.

SECTION - C

III. Answer any **THREE** questions. Each question carries **10** marks. (3×10=

17. What is a logic gate? Explain the basic logic gates.

18. Subtract 55 from 21 using 2's complement method.

19. Explain the different types of programming languages.

20. Explain the advantages and disadvantages of computer networks.

21. Describe the types of e-commerce.

10908(New)

B.A./B.Com./B.Sc./B.B.A./G.M.T. III - Semester Degree Examination,

Nov./Dec. - 2018

COMPUTER SCIENCE

(Computer Fundamentals)

Paper - 3.3

(New)

Time : 3 Hours Maximum Marks : 80

SECTION-A

Answer any TEN from the following (10×2=20)

1. Who is Father of Computer?
2. Expand ALU, RAM
3. Write any two limitations of computer.
4. What is Software?
5. Name any two Operating System.
6. What is Recycle Bin?
7. Write the shortcut key for copy, paste.
8. What is Table?
9. What is Text Formatting?
10. Write the meaning of cell address.
11. How many rows and columns are available in worksheet?
12. What is presentation?

SECTION-B

(3×5 =15)

Answer any **THREE** from the following

13. What are characteristics of computer?
14. Write the procedure to create icon on the desktop
15. How do you find and replace text in MS word?
16. Write the procedure to save a Workbook.
17. Write a note on Normal view in MS power point.

SECTION-C

Answer any **THREE** from the following (3×15 = 45)

18. Write the features of generation of computers.
19. What is Header and Footer? How do you insert Header and Footer?
20. What is Mail Merge? How do you merge documents?
21. What is Chart? Write the procedure to insert charts.
22. What is slide Transition? Write the procedure to apply slide transition

10918

B.A./B.Com./B.B.M./B.Sc (Non-Computer) III - Semester (CBCS)

Degree Examination, Nov./Dec. - 2018

COMPUTER SCIENCE

Fundamentals of Computers and MS-Office

Paper - 3.3

Time : 3 Hours **Maximum Marks : 70**

SECTION - A

a) Answer any **Ten** questions.

b) Each question carries **Two** marks. **(10×2=20)**

1. What is Computer?
2. Write the types of Memory.
3. Expand ENIAC.
4. What is Application Software?
5. What is translator?
6. What is Operating Systems.
7. What is folder?
8. What is Word Processor?
9. Write the short cut keys for copy and print.
10. Write the number of rows and columns present in a worksheet.
11. What is Chart?
12. What is Presentation?

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SECTION - B

a) Answer any **Four** questions.

b) Each question carries **Five** marks. (4×5=20)

13. Draw a neat Block diagram of Computer and mention the parts.
14. Write the types of Operating Systems.
15. What is window? Write any four features of windows.
16. What are features of MS Word?
17. Write a note on Find and Replace in MS Excel.
18. How do you apply Slide Transitions?

SECTION - C

a) Answer any **Three** questions.

b) Each question carries **Ten** marks. (3×10=30)

19. Write a short note on computer history.
20. Explain different types of computer languages.
21. Define the followings
    a) My computer
    b) My document
    c) Recycle bin
    d) Desktop
    e) File
22. What is Mail Merge? How do you merge two documents?
23. Explain any five functions of MS Excel with syntax and example.

9521

B.A./B.Com./B.Sc. III - Semester Degree Examination, Nov./Dec. - 2018

JOURNALISM - III (Open Elective)

Journalism and Writing Skills for Media (OEC)

Paper - 3.2

Time : 3 Hours Maximum Marks : 70

Instructions to Candidates:

1) Part 'A' any Ten questions.
2) Part 'B' any Two questions.
3) Part 'C' any Two questions.

Part - A

ಭಾಗ - ಅ

Answer any Ten of the following. (10×2=20)

ಯಾವುದಾದರೂ ಹತ್ತಕ್ಕೆ ಉತ್ತರಿಸಿ.

1. Folio

   ಫೋಲಿಯೋ

2. Editorial

   ಸಂಪಾದಕೀಯ

3. News Desk

   ಸುದ್ದಿ ಮೇಜು

4. Review

   ವಿಮರ್ಶೆ

5. Lay out

   ವಿನ್ಯಾಸ

6. Spelling errors.

   ಅಕ್ಷರ ದೋಷ

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7. OPED

ಓಪೆಡ್

8. Columns writing.

ಅಂಕಣ ಬರಹ

9. Banner headline

ಬ್ಯಾನರ್ ಶೀರ್ಷಿಕೆ

10. Photo Cropp

ಚಿತ್ರ ಕತ್ತರಿ

11. PTI

ಪಿಟಿಐ

12. Style Sheet

ಸ್ಟೈಲ್ ಶೀಟ್

Part - B

ಭಾಗ - ಬ

Answer any Two of the following. **(2×10=20)**

ಯಾವುದಾದರೂ **ಎರಡಕ್ಕೆ** ಉತ್ತರಿಸಿ.

13. Explain the organisation structure of editorial section.

ಸಂಪಾದಕೀಯ ವಿಭಾಗದ ಸಾಂಸ್ಥಿಕ ರಚನೆಯನ್ನು ವಿವರಿಸಿ.

14. Describe the types of reporting.

ವರದಿಗಾರಿಕೆಯ ಪ್ರಕಾರಗಳನ್ನು ವಿಶ್ಲೇಷಿಸಿ.

15. Explain the interview types and techniques.

ಸಂದರ್ಶನದ ಪ್ರಕಾರ ಮತ್ತು ತಂತ್ರಗಳನ್ನು ವಿವರಿಸಿ.

16. Discuss the columns and feature writings.

ಅಂಕಣ ಮತ್ತು ನುಡಿಚಿತ್ರ ಬರಹಗಳ ಕುರಿತು ಚರ್ಚಿಸಿ.

Part - C

ಭಾಗ - ಕ

Answer any Two of the following. **(2×15=30)**

ಯಾವುದಾದರೂ ಎರಡಕ್ಕೆ ಉತ್ತರಿಸಿ.

17. Explain the values and sources of news.

ಸುದ್ದಿಯ ಅಂಶಗಳು ಹಾಗೂ ಮೂಲಗಳನ್ನು ವಿವರಿಸಿ.

18. Describe the role of news editor and subeditor in news desk.

ಸುದ್ದಿ ಮೇಜಿನಲ್ಲಿ ಸುದ್ದಿ ಸಂಪಾದಕ ಹಾಗೂ ಉಪಸಂಪಾದಕನ ಪಾತ್ರ ವಿಶ್ಲೇಷಿಸಿ.

19. Discuss the importance of Grammar in print media.

ಮುದ್ರಣ ಮಾಧ್ಯಮದಲ್ಲಿ ವ್ಯಾಕರಣದ ಮಹತ್ವವನ್ನು ಚರ್ಚಿಸಿ.

20. Explain the types of leads and news writing techniques.

ಸುದ್ದಿ ಬರೆಯುವ ತಂತ್ರಗಾರಿಕೆ ಮತ್ತು ಲೀಡ್‌ನ ವಿಧಗಳನ್ನು ವಿವರಿಸಿ.
