

CBCS SCHEME

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17MAT31

Third Semester B.E. Degree Examination, June/July 2019 Engineering Mathematics – III

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Obtain the fourier series of the function $f(x) = x - x^2$ in $-\pi \leq x \leq \pi$ and hence deduce $\frac{\pi^2}{12} = \frac{1}{1^2} - \frac{1}{2^2} + \frac{1}{3^2} - \frac{1}{4^2} + \dots$ (08 Marks)
- b. Obtain the Half Range Fourier cosine series for the $f(x) = \sin x$ in $[0, \pi]$. (06 Marks)
- c. Obtain the constant term and the coefficients of first sine and cosine terms in the fourier expansion of y given

x :	0	1	2	3	4	5
y :	9	18	24	28	26	20

(06 Marks)

OR

- 2 a. Obtain the fourier series of $f(x) = \frac{\pi - x}{2}$ in $[0, 2\pi]$ and hence deduce that $\frac{\pi}{4} = 1 - \frac{1}{3} + \frac{1}{5} - \frac{1}{7} + \dots$ (08 Marks)
- b. Find the fourier half range cosine series of the function $f(x) = 2x - x^2$ in $[0, 3]$. (06 Marks)
- c. Express y as a fourier series upto first harmonic given

x :	0	30	60	90	120	150	180	210	240	270	300	330
y :	1.8	1.1	0.30	0.16	1.5	1.3	2.16	1.25	1.3	1.52	1.76	2.0

(06 Marks)

Module-2

- 3 a. Find the fourier transform of $f(x) = \begin{cases} a^2 - x^2; & |x| \leq a \\ 0 & ; |x| > a \end{cases}$ and hence deduce $\int_0^a \frac{\sin x - x \cos x}{x^3} dx = \frac{\pi}{4}$ (08 Marks)
- b. Find the fourier sine transform of $e^{-|x|}$ and hence evaluate $\int_0^{\infty} \frac{x \sin ax}{1+x^2} dx; a > 0$ (06 Marks)
- c. Obtain the z-transform of $\cos n\theta$ and $\sin n\theta$. (06 Marks)

OR

- 4 a. Find the fourier transform of $f(x) = xe^{-|x|}$. (08 Marks)
- b. Find the fourier cosine transform of $f(x)$ where

$$f(x) = \begin{cases} x & ; 0 < x < 1 \\ 2-x & ; 1 < x < 2 \\ 0 & ; x > 2 \end{cases}$$

(06 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8=50, will be treated as malpractice.

- c. Solve $u_{n+2} + 6u_{n+1} + 9u_n = 2^n$ with $u_0 = u_1 = 0$ using z-transform. (06 Marks)

Module-3

- 5 a. Fit a straight line $y = ax + b$ for the following data by the method of least squares.

x :	1	3	4	6	8	9	11	14
y :	1	2	4	4	5	7	8	9

(08 Marks)

- b. Calculate the coefficient of correlation for the data:

x :	92	89	87	86	83	77	70	63	53	50
y :	86	83	91	77	68	85	54	82	37	57

(06 Marks)

- c. Compute the real root of $x \log_{10} x - 1.2 = 0$ by the method of false position. Carry out 3 iterations in (2, 3). (06 Marks)

OR

- 6 a. Fit a second degree parabola to the following data $y = a + bx + cx^2$.

x :	1	1.5	2	2.5	3	3.5	4
y :	1.1	1.3	1.6	2	2.7	3.4	4.1

(08 Marks)

- b. If θ is the angle between two regression lines, show that

$$\tan \theta = \left(\frac{1-r^2}{r} \right) \frac{\sigma_x \sigma_y}{\sigma_x^2 + \sigma_y^2}; \text{ explain significance of } r=0 \text{ and } r=\pm 1. \quad (06 \text{ Marks})$$

- c. Using Newton Raphson method, find the real root of the equation $3x = \cos x + 1$ near $x_0 = 0.5$. Carry out 3 iterations. (06 Marks)

Module-4

- 7 a. From the following table, estimate the number of students who obtained marks between 40 and 45.

Marks :	30 – 40	40 – 50	50 – 60	60 – 70	70 – 80
No. of students	31	42	51	35	31

(08 Marks)

- b. Use Newton's dividend formula to find $f(9)$ for the data:

x :	5	7	11	13	17
f(x) :	150	392	1452	2366	5202

(06 Marks)

- c. Find the approximate value of $\int_0^{\pi/2} \sqrt{\cos \theta} d\theta$ by Simpson's $\frac{1}{3}$ rd rule by dividing $\left[0, \frac{\pi}{2}\right]$ into 6 equal parts. (06 Marks)

OR

- 8 a. The area A of a circle of diameter d is given for the following values:

d :	80	85	90	95	100
a :	5026	5674	6362	7088	7854

Calculate the area of circle of diameter 105 by Newton's backward formula. (08 Marks)

- b. Using Lagrange's interpolation formula to find the polynomial which passes through the points (0, -12), (1, 0), (3, 6), (4, 12). (06 Marks)

- c. Evaluate $\int_4^{5.2} \log_e x dx$ taking 6 equal parts by applying Weddle's rule. (06 Marks)

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17CV/CT32

Third Semester B.E. Degree Examination, June/July 2019 Strength of Materials

Time: 3 hrs.

Max. Marks: 100

- Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. Missing data, if any, may be suitably assumed.

Module-1

- 1 a. With a neat sketch, define salient features of stress – strain curve for a tensile specimen. (06 Marks)
- b. Define the following terms :
i) True stress ii) Proof stress iii) Poisson's ratio. (06 Marks)
- c. A compound bar consists of a circular rod of steel of diameter 20mm rigidly fitted into a copper tube of inner diameter 20mm and thickness 5mm both of same length. If both are subjected to a load of 100kN, find the stress developed in the two materials. $E_s = 200$ GPa and $E_c = 120$ GPa. (08 Marks)

OR

- 2 a. Derive an expression for elongation of a tapering plate of thickness t , subjected to a tensile force. (08 Marks)
- b. Explain temperature stresses induced in a body and derive an expression to find the same. (04 Marks)
- c. A composite bar made of aluminium and steel is held between two supports. Find the stresses in the bars when temperature falls by 20°C , given that the length of steel and aluminium bars are 600mm and 300mm and cross sectional areas are 200mm^2 and 300mm^2 respectively.
 $\alpha_s = 11.7 \times 10^{-6}/^\circ\text{C}$ and $\alpha_a = 23.4 \times 10^{-6}/^\circ\text{C}$, $E_s = 210$ GPa and $E_a = 70$ GPa. (08 Marks)



Fig.Q2(c)

Module-2

- 3 a. For a state of stresses with $\sigma_x = 85$ MPa (Tensile), $\sigma_y = 60$ MPa (compressive) with a shear stress of 45 MPa, determine the principal stresses and locate principal planes. Also obtain maximum tangential stress and locate corresponding planes (Fig.Q3(a)). (10 Marks)

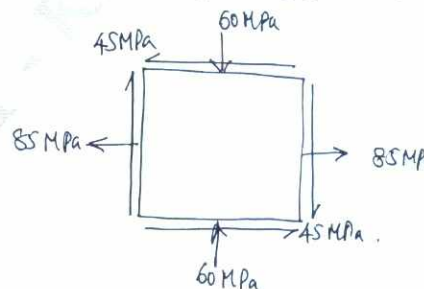


Fig.Q3(a)

- b. Derive an equation for change in volume for a thin cylinders. (10 Marks)

OR

- 4 a. Derive an expression for normal and tangential stresses on an inclined plane whose normal makes an angle θ with the inclination of σ_x . (10 Marks)
- b. A pipe of 400mm internal diameter and 100mm thickness contains a fluid at a pressure of 80MPa. Find the maximum and minimum hoop stress across section. Sketch the radial and hoop stress distribution across the section. (10 Marks)

Module-3

- 5 a. Define shear force and bending moment along with sign convention and units. (06 Marks)
- b. For the beam shown in Fig.Q5(b), draw the shear force and bending moment diagram and locate the point of contraflexure. (14 Marks)

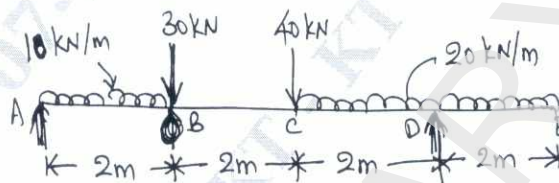


Fig.Q5(b)

OR

- 6 a. Derive the relation between load intensity, shear force and bending moment. (06 Marks)
- b. Draw shear force and bending moment diagram for the beam shown in Fig.6(b). Locate the points of contraflexure. (14 Marks)

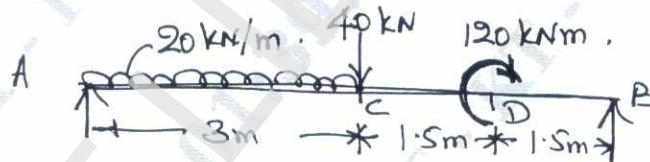


Fig.6(b)

Module-4

- 7 a. Derive the torsional equation for a circular shaft.

$$\frac{T}{J} = \frac{\tau_s}{R} = \frac{C\theta}{\ell}$$

(10 Marks)

- b. A component is subjected to the following stresses $\sigma_x = 60\text{MPa}$, $\sigma_y = 45\text{MPa}$, $\tau_{xy} = 30\text{MPa}$. The yield stress of the material is 300MPa and Poisson's ratio 0.3. Find the factor of safety using maximum principal stress theory, maximum shear stress theory and maximum principal strain theory. (10 Marks)

OR

- 8 a. Explain maximum principal stress, maximum shear stress and principal strain theories of failure. Derive the necessary equations to assess the failure. (10 Marks)
- b. A solid shaft transmits 250 kW at 100rpm. If the shear stress is not to exceed 75 MPa, what should be the diameter of the shaft? If this shaft is to be replaced by a hollow one, whose diameter ratio is 0.6, determine the size and percentage saving in weight the maximum shear stress being the same. (10 Marks)

Module-5

- 9 a. Derive the equation of pure bending $\frac{M}{I} = \frac{f}{y} = \frac{E}{R}$ with usual notations. State the assumptions. (10 Marks)
- b. Find the Euler's crippling load for a hollow cylindrical steel column of 40mm diameter and 4mm thick. Take the length of the column as 2.3m and column is hinged at both ends. Also determine the crippling load by Rankine's formula using constants as 335MPa and 1/75,000. Take $E = 205 \times 10^3 \text{N/mm}^2$. (10 Marks)

OR

- 10 a. State the assumptions and derive an expression for Euler's crippling load for a column with both ends hinged. (10 Marks)
- b. A simply supported beam 100mm×200mm carries a central concentrated load W. The permissible stress in bending and shear are 15MPa and 1.2MPa respectively. Determine the safe load W, if the span of the beam is 3m. (10 Marks)

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Third Semester B.E. Degree Examination, June/July 2019

Fluid Mechanics

Time: 3 hrs.

Max. Marks: 100

**Note: Answer any FIVE full questions, choosing
ONE full question from each module.**

Module-1

- 1 a. Define the following with symbols and units :
 - i) Weight density
 - ii) Specific volume
 - iii) Density. (06 Marks)
- b. What do you mean by single column manometer? Derive the expression for vertical single column manometer. (06 Marks)
- c. The right limb of a simple U-tube manometer containing mercury is open to the atmosphere while the left limb is connected to a pipe which a fluid of sp.gr. 0.9 is flowing. The centre of the pipe is 12cm below the level of the mercury in the right limb. Find the pressure of fluid in the pipe. If difference of mercury level in the two limb is 20cm. (08 Marks)

OR

- 2 a. What is capillarity? Derive an expression for capillarity rise for a liquid in a glass tube. (06 Marks)
- b. Explain difference between i) absolute and gauge pressure ii) Newtonian and non Newtonian iii) ideal fluid and real fluid iv) simple manometer and differential manometer. (08 Marks)
- c. Calculate pressure due to a column of 0.4 of i) water ii) an oil of sp.gr 0.9 and iii) mercury of sp.gt 13.6. Take density water $\rho = 1000 \text{ kg/m}^3$. (06 Marks)

Module-2

- 3 a. Derive an expression for total pressure and centre of pressure of a inclined plane surface immersed in a liquid. (08 Marks)
- b. Determine the total pressure and depth of centre of pressure on a plane rectangular surface of 1m wide and 3m deep when its upper edge is horizontal and i) coincides with water surface ii) 2m below the free water surface. (06 Marks)
- c. A circular plate 3m diameter is immersed in water in such way that its greatest and least depth below the free surface are 4m and 1.5m respectively. Determine the total pressure on one face of the plate and position of centre of pressure. (06 Marks)

OR

- 4 a. Define :
 - i) Uniform and non-uniform flow
 - ii) Rotational and irrotational flow
 - iii) Stream line and path line
 - iv) Laminar and turbulent flow. (08 Marks)
- b. Derive the three dimensional continuity equation in the Cartesian coordinates. (06 Marks)
- c. A 40cm diameter pipe, conveying water, branches into two pipes of diameter 30cm and 20cm respectively. If the average velocity in the 40cm pipe is 3m/sec. Find the discharge in the pipe. Also determine velocity in 20cm pipe if the average velocity in 30cm diameter pipe is 2m/sec. (06 Marks)

Module-3

- 5 a. Derive an expression for Bernoulli's equation and state the assumption made for such a derivation. (06 Marks)
- b. What is venturimeter? Derive an expression for the discharge through venturimeter. (08 Marks)
- c. Water flowing through a pipe having diameter 30cm and 15cm at the bottom and upper end respectively. The intensity of pressure at the bottom end is 29.43N/cm^2 and pressure at the upper end is 14.715N/cm^2 . Determine the difference datum head if the rate of flow through the pipe is 50lit/sec. (06 Marks)

OR

- 6 a. Define the terms : i) Free vortex ii) Forced vortex (04 Marks)
- b. State the momentum equation. How will you apply the momentum equation for determining the force exerted by flowing liquid on a bend? (08 Marks)
- c. 250 lit/sec of water is flowing in a pipe having diameter of 300mm. If the pipe is bent by 135° (i.e changes from initial to final direction is 135°). Find the magnitude and direction of the resultant force on the bend. The pressure of water flowing is 39.24N/cm^2 . (08 Marks)

Module-4

- 7 a. Prove that the discharge over triangular notch is $Q = \frac{8}{15} cd\sqrt{2g} \tan\theta/2H^{3/2}$. (08 Marks)
- b. Explain the experimental determination of hydraulic coefficients C_d , C_v and C_c . (06 Marks)
- c. The head of water over an orifice of diameter 100mm is 5m. The water coming out from the orifice is collected in a circular tank of diameter 2m. The rise of water level in this tank is 0.45m in 30Sec. Also coordinates of certain point of jet, measured by venacontracts are 100cm horizontal and 5.2cm vertical. Find the hydraulic coefficients C_d , C_v and C_c . (06 Marks)

OR

- 8 a. Distinguish between : i) Notch and Weir ii) Orifice and mouthpiece. (04 Marks)
- b. What is Cipolletti weir? Prove that the discharge through Cipolletti Weir is given by $Q = \frac{2}{3} cd\sqrt{2g} H^{3/2}$. (08 Marks)
- c. The water flowing in a rectangular channel of 1.2m wide and 0.8m deep. Find the discharge over the rectangular Weir of the crest length 70cm. If the head of water over the crest of weir is 25cm and water from channel flows over the weir. Take $C_d = 0.60$ Neglect end contraction but consider velocity of approach. (08 Marks)

Module-5

- 9 a. Explain the terms with neat sketch : i) Pipes in parallel ii) Pipes in series iii) Hydraulic gradient line iv) Total energy line. (08 Marks)
- b. Three pipes of length 800m, 500m and 400m and of diameter 500mm, 400mm and 300mm respectively are connected by a single pipe of length 1700m. Find the diameter of the single pipe. (06 Marks)
- c. Find the diameter of the pipe of length 2500m when the rate of flow of water through the pipe is $0.25\text{m}^3/\text{sec}$ and head loss due to friction is 5m. Take $C = 50$ in Chezy's formula. (06 Marks)

OR

- 10 a. What do you mean by equivalent pipe? Obtain an expression for equivalent pipe. (08 Marks)
- b. Derive expression for the loss of head due to sudden expansion in the pipe. (08 Marks)
- c. Find the loss of head when pipe of diameter 200mm is suddenly enlarged to a diameter of 400mm. The rate of flow of water through the pipe is 250lit/sec. (04 Marks)

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17CV34

Third Semester B.E. Degree Examination, June/July 2019 Basic Surveying

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Explain fundamental principles of surveying. (06 Marks)
b. Differentiate between (i) Plan and map (ii) Accuracy and Precision. (06 Marks)
c. A survey line BAC crosses a river, A and C being on the neat and distant banks respectively. Standing at D, a point 100 meters measured perpendicular to AB from A, the bearing of C and B are 230° respectively, AB being 50 meters. Find the width of the river. (08 Marks)

OR

- 2 a. Define surveying. Briefly explain the classification of surveying (08 Marks)
b. Explain the methods of chaining on sloping ground. (04 Marks)
c. A steel tape 30 meters long standardizing at 60°F with a pull of 10 kg and was used in measuring a baseline. Find the correction per tape length if the temperature at the time of measurement was 85°F and pull exerted was 16 kg. Weight of 1 centimeter cube of steel is 7.86 grams and total weight of tape is 0.8 kg. $E = 2.1 \times 10^6 \text{ kg/cm}^2$ and co-efficient of expansion of tape per $1^\circ\text{F} = 6.2 \times 10^{-6}$. (08 Marks)

Module-2

- 3 a. Differentiate between (i) Fore bearing and back bearing (ii) Magnetic bearing and True bearing (iii) Magnetic declination and magnetic dip. (06 Marks)
b. Explain the uses of theodolite. (06 Marks)
c. Determine the included angles in a closed traverse ABCDA conducted in a clockwise direction, given the following bearing observed with a prismatic compass.

Line	AB	BC	CD	DA
Fore bearing	40°	70°	210°	280°

Apply check.

(08 Marks)

OR

- 4 a. What are the different methods of measuring horizontal angle using theodolite? Explain any one in detail. (10 Marks)
b. Following bearing were observed with a prismatic compass.

Line	AB	BC	CD	DE	EA
Fore bearing	$74^\circ 0'$	$91^\circ 0'$	$166^\circ 0'$	$177^\circ 0'$	$289^\circ 0'$
Back bearing	$254^\circ 0'$	$271^\circ 0'$	$343^\circ 0'$	$0^\circ 0'$	$109^\circ 0'$

Where do you suspect the local attraction? Find the correct bearings.

(10 Marks)

Module-3

- 5 a. Derive distance and elevation formulae for stadia tachometry, when staff held normal to the line of sight, for both an angle of elevation and an angle of depression. (08 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and/or equations written eg, $42+8=50$, will be treated as malpractice.

- b. The following data is available for a closed traverse ABCDA. Determine closing error and adjust the traverse using transit rule. Take co-ordinates of A(200, 100), compute coordinates of all the stations.

Line	AB	BC	CD	DA
Length (m)	250	123	256	108
Bearing	86° 42'	178° 06'	270° 0'	2° 0'

(12 Marks)

OR

- 6 a. What are the different methods of balancing the traverse? Explain them. (08 Marks)
 b. A tachometer is set up at an intermediate point on a traverse course PQ and following observations are made on a vertically held staff.

Staff Station	Vertical angle	Staff intercept	Axial hair readings.
P	+ 8° 36'	2.350	2.105
Q	+ 6° 06'	2.055	1.895

The instrument is fitted with annalistic lens and the constant is 100. Compute the length of PQ and reduced level of Q, that of P being 321.50 meters. (12 Marks)

Module-4

- 7 a. Explain temporary adjustments of a dumpy level. (06 Marks)
 b. Define the following terms: (i) Bench mark (ii) Back sight (iii) Reduced level (iv) Datum. (04 Marks)
 c. The following staff readings were observed successively with a level, the instrument have been moved forward after the second, fourth and eighth readings.
 0.875, 1.235, 2.310, 1.385, 2.930, 3.125, 4.125, 0.120, 1.875, 2.030, 3.765.
 The first reading was taken with the staff held upon a bench mark of elevation 132.135m. Enter the readings in a page of level book and reduce the levels. Apply the usual check. (10 Marks)

OR

- 8 a. Compare rise and fall method of reducing levels with the height of collimation method. (06 Marks)
 b. The following consecutive readings were taken with a level and 5 meter leveling staff on a continuously sloping ground at common interval of 20 meters.
 0.585, 1.830, 1.925, 2.825, 3.730, 4.685, 0.825, 2.005, 3.110, 4.485.
 The reduced level of first point was 218.125m. Rule out a page of level book and enter the above readings. Calculate the reduced level of points by rise and fall method and also gradient of the line joining first and last point. (14 Marks)

Module-5

- 9 a. What are the different methods of contouring? Discuss the merits and demerits of each. (08 Marks)
 b. The following give the values in meters of the offsets taken from a chain line to an irregular boundary calculate the area included between the chain line and irregular boundary and first and last offsets by (i) Simpson rule (ii) Trapezoidal rule.

Distance in m	0	50	100	150	200	250	300	350	400
Off sets in m	10.6	15.4	20.2	18.7	16.4	20.8	22.4	19.3	17.6

(12 Marks)

OR

- 10 a. What are the different characteristics of contour lines? Explain with neat sketches. (06 Marks)
- b. Discuss the different methods of determining areas. (04 Marks)
- Calculate the volume of earth work by prismoidal rule in a road embankment with following data:

Chainage along centre line	0	100	200	300	400
Ground level	201.700	202.900	202.400	204.700	205.900

Formation level at chainage 0 is 203.300m, top width is 12.0 meters, side slope is 2 to 1 and longitudinal gradient is 1 in 100. The ground is level across the centre line. (10 Marks)

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17CV/CT35

Third Semester B.E. Degree Examination, June/July 2019 Engineering Geology

Time: 3 hrs.

Max. Marks: 100

- Note: 1. Answer any FIVE full questions, choosing ONE full question from each module.
2. Write sketches wherever required.**

Module-1

- 1 a. Explain major shells of the Earth interior with reference to its composition and density. (10 Marks)
b. Explain important 'light dependent' physical properties of minerals with examples. (06 Marks)
c. What are Rock forming and Ore forming minerals and give two examples each. (04 Marks)

OR

- 2 a. Briefly explain : i) SIAL and SIMA ii) Discontinuities in earth's interior. (06 Marks)
b. Write a note on application of geology in civil engineering projects. (08 Marks)
c. Describe important physical properties and engineering uses of following minerals :
i) Gypsum ii) Bauxite. (06 Marks)

Module-2

- 3 a. What are sedimentary rock? Explain its classification based on grain size of sediments giving example. (08 Marks)
b. Explain broad classification of igneous rocks giving examples relevant to construction material. (06 Marks)
c. Explain the properties and engineering uses of any one rock from each group :
i) Elastic sedimentary Rock ii) Metamorphic Rocks. (06 Marks)

OR

- 4 a. Explain the formation of folds and joints and add a note on their importance in civil engineering. (06 Marks)
b. Explain geological consideration of selection of dam site on inclined and faulted rocks. (08 Marks)
c. Explain : i) Deformation of rocks ii) Rock Quality Designation (RQD). (06 Marks)

Module-3

- 5 a. What is Weathering? Briefly explain mechanical weathering. (06 Marks)
b. Write a note on Watershed management. (04 Marks)
c. What is an Earthquake? Discuss causes, effects and mechanism. (10 Marks)

OR

- 6 a. Briefly explain geological work of running water and its importance in civil engineering. (08 Marks)
b. Write a note on seismic resistant structures. (06 Marks)
c. Explain i) Drainage pattern ii) Reservoir induced Seismicity. (06 Marks)

Module-4

- 7 a. What is an Aquifer? With neat sketch, explain its types. (06 Marks)
b. Explain Electrical resistivity method with resistivity curves for ground water exploration. (10 Marks)
c. Write a note on Ground water pollution. (04 Marks)

OR

- 8 a. Explain Seismic method to understand subsurface geology. (06 Marks)
b. Describe various method of artificial recharging of ground water. (10 Marks)
c. Write a note on sea water intrusion and remedial measure. (04 Marks)

Module-5

- 9 a. What is Remote sensing? Write its principle and list important applications in civil engineering. (10 Marks)
b. What are Toposheets and geological maps? Add a note on their uses in civil engineering. (06 Marks)
c. What is disaster and explain its types. (04 Marks)

OR

- 10 a. What is Global positioning system? Explain its concept and application in civil engineering. (10 Marks)
b. Explain : i) Impact of mining on environment ii) LANDSAT imageries. (10 Marks)

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17CV36

Third Semester B.E. Degree Examination, June/July 2019 Building Materials and Construction

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Enumerate the importance of good building stone. (05 Marks)
b. Write a brief note on stabilized mud block. (05 Marks)
c. Mention the different test conducted on bricks and explain any two test. (10 Marks)

OR

- 2 a. Enumerate the functions of good mortar. (05 Marks)
b. Mention different types of surface finishes in stones. (05 Marks)
c. What is fineness modulus of fine aggregate? Explain the method to determine fineness modulus of fine aggregate. (10 Marks)

Module-2

- 3 a. What are the different types of joints in stone masonry? (05 Marks)
b. Define : i) header ii) Lap iii) Bat iv) Frog v) Arris. (05 Marks)
c. With neat sketch, explain combined footing and pile foundation. (10 Marks)

OR

- 4 a. Enumerate function of good foundation. (05 Marks)
b. Mention different types of partition walls. (05 Marks)
c. Draw the elevation of English and Flemish bond and compare English and Flemish. (10 Marks)

Module-3

- 5 a. Highlight the important qualities of good flooring materials. (05 Marks)
b. Discuss various modes of failures of an arch. (05 Marks)
c. Briefly explain laying of : i) concrete flooring ii) granite flooring. (10 Marks)

OR

- 6 a. Compare flat roof and sloped roof. (05 Marks)
b. Explain different types of lintels. (05 Marks)
c. What are the requirements of good roof? Draw a neat sketch of king post truss and show important elements. (10 Marks)

Module-4

- 7 a. State briefly the requirements of good staircase. (05 Marks)
b. Discuss importance of formwork in constructional activity. (05 Marks)
c. With neat sketch, explain impotence of i) Bay window ii) Collapsible door. (10 Marks)

OR

- 8 a. Draw a neat sketch of paneled door and show important elements. (05 Marks)
b. Discuss different types of stairs. (05 Marks)
c. Write short notes on the following : (10 Marks)
i) Ranking shore ii) underpinning by pit method.

Module-5

- 9 a. Discuss different types of plaster finishes. (05 Marks)
b. What are the causes for the dampness in building? (05 Marks)
c. Discuss the constituents of points and importance of the same. (10 Marks)

OR

- 10 a. Enumerate the requirements of good damp proof course. (05 Marks)
b. What are the characteristics of ideal point? (05 Marks)
c. Explain procedure for : (10 Marks)
i) Painting on new iron and steel work
ii) Lime plaster with three coats.

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CBCS SCHEME

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17MATDIP31

Third Semester B.E. Degree Examination, June/July 2019 Additional Mathematics – I

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Find the sine of the angle between $\vec{a} = 2\hat{i} - 2\hat{j} + \hat{k}$ and $\vec{b} = \hat{i} - 2\hat{j} + 2\hat{k}$. (08 Marks)
- b. Express the complex number $\frac{(1+i)(1+3i)}{1+5i}$ in the form $a + ib$. (06 Marks)
- c. Find the modulus and amplitude of $\frac{(1+i)^2}{3+i}$. (06 Marks)

OR

- 2 a. Show that $(1 + \cos \theta + i \sin \theta)^n + (1 + \cos \theta - i \sin \theta)^n = 2^{n+1} \cos^n \left(\frac{\theta}{2} \right) \cdot \cos \left(\frac{n\theta}{2} \right)$. (08 Marks)
- b. If $\vec{a} = 2\hat{i} + 3\hat{j} - 4\hat{k}$ and $\vec{b} = 8\hat{i} - 4\hat{j} + \hat{k}$, then prove that \vec{a} is perpendicular to \vec{b} . Also find $|\vec{a} \times \vec{b}|$. (06 Marks)
- c. Determine λ such that $\vec{a} = \hat{i} + \hat{j} + \hat{k}$, $\vec{b} = 2\hat{i} - 4\hat{k}$ and $\vec{c} = \hat{i} + \lambda\hat{j} + 3\hat{k}$ are coplanar. (06 Marks)

Module-2

- 3 a. If $y = \cos(m \log x)$ then prove that $x^2 y_{n+2} + (2n+1)xy_{n+1} + (m^2 + n^2)y_n = 0$. (08 Marks)
- b. Find the angle of intersection of the curves $r^2 \sin 2\theta = a^2$ and $r^2 \cos 2\theta = b^2$. (06 Marks)
- c. Find the pedal equation of the curve $r = a(1 + \sin \theta)$. (06 Marks)

OR

- 4 a. Obtain the Maclaurin's series expansion of $\log \sec x$ up to the terms containing x^6 . (08 Marks)
- b. If $u = \operatorname{cosec}^{-1} \left(\frac{x^{\frac{1}{2}} + y^{\frac{1}{2}}}{x^{\frac{1}{3}} + y^{\frac{1}{3}}} \right)$, prove that $xu_x + yu_y = -\frac{1}{6} \tan u$. (06 Marks)
- c. Find $\frac{\partial(u, v, w)}{\partial(x, y, z)}$ where $u = x + y + z$, $v = y + z$, $w = z$. (06 Marks)

Module-3

- 5 a. Obtain a reduction formula for $\int_0^{\pi/2} \sin^n x dx$, ($n > 0$). (08 Marks)
- b. Evaluate $\int_0^{2a} x^2 \sqrt{2ax - x^2} dx$. (06 Marks)
- c. Evaluate $\int_0^1 \int_x^{\sqrt{x}} xy dy dx$ (06 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and/or equations written eg, 42+8=50, will be treated as malpractice.

OR

- 6 a. Evaluate $\int_0^a \int_0^x \int_0^{x+y} e^{x+y+z} dz dy dx$. (08 Marks)
- b. Evaluate $\int_0^{\infty} \frac{x^6}{(1+x^2)^{9/2}} dx$. (06 Marks)
- c. Evaluate $\iint_A xy dx dy$ where A is the area bounded by the circle $x^2 + y^2 = a^2$ in the first quadrant. (06 Marks)

Module-4

- 7 a. A particle moves along the curve $\vec{r} = \cos 2t \hat{i} + \sin 2t \hat{j} + t \hat{k}$. Find the components of velocity and acceleration at $t = \frac{\pi}{8}$ along $\sqrt{2} \hat{i} + \sqrt{2} \hat{j} + \hat{k}$. (08 Marks)
- b. Find divergence and curl of the vector $\vec{F} = (xyz + y^2z) \hat{i} + (3x^2 + y^2z) \hat{j} + (xz^2 - y^2z) \hat{k}$. (06 Marks)
- c. Find the directional derivative of $\phi = x^2yz^3$ at (1, 1, 1) in the direction of $\hat{i} + \hat{j} + 2\hat{k}$. (06 Marks)

OR

- 8 a. Find the angle between the tangents to the curve $x = t^2, y = t^3, z = t^4$ at $t = 2$ and $t = 3$. (08 Marks)
- b. Find $\text{curl}(\text{curl} \vec{A})$ where $\vec{A} = xy \hat{i} + y^2z \hat{j} + z^2y \hat{k}$. (06 Marks)
- c. Find the constants a, b, c such that the vector field $(\sin y + az) \hat{i} + (bx \cos y + z) \hat{j} + (x + cy) \hat{k}$ is irrotational. (06 Marks)

Module-5

- 9 a. Solve $\frac{dy}{dx} = \frac{y}{x} + \sin\left(\frac{y}{x}\right)$. (08 Marks)
- b. Solve $\frac{dy}{dx} + y \cot x = \sin x$. (06 Marks)
- c. Solve $\frac{dy}{dx} + \frac{y}{x} = y^2 x$. (06 Marks)

OR

- 10 a. Solve $x^2 y dx - (x^3 + y^3) dy = 0$. (08 Marks)
- b. Solve $x^2 \frac{dy}{dx} = 3x^2 - 2xy + 1$. (06 Marks)
- c. Solve $\left[y \left(1 + \frac{1}{x} \right) + \cos y \right] dx + [x + \log x - x \sin y] dy = 0$. (06 Marks)

CBCS SCHEME

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17CPH39/49

Question Paper Version : D

Third/Fourth Semester B.E. Degree Examination, June/July 2019
Constitution of India, Professional Ethics & Human Rights
(COMMON TO ALL BRANCHES)

Time: 2 hrs.]

[Max. Marks: 30

INSTRUCTIONS TO THE CANDIDATES

1. Answer all the thirty questions, each question carries **ONE mark**.
2. Use only **Black ball point pen** for writing / darkening the circles.
3. **For each question, after selecting your answer, darken the appropriate circle corresponding to the same question number on the OMR sheet.**
4. Darkening two circles for the same question makes the answer invalid.
5. **Damaging/overwriting, using whiteners** on the **OMR** sheets are strictly prohibited.

-
1. The 9th schedule to the Indian Constitution was added by;
a) 1st Amendment
b) 8th Amendment
c) 9th Amendment
d) 42nd Amendment
 2. Which one of the following Articles of the directive principles of state policy deals with the promotion of international peace and security?
a) 51
b) 48A
c) 43A
d) 41
 3. The ideal of 'Welfare state' in the Indian Constitution is enshrined in its ;
a) Preamble
b) Directive Principles of State Policy
c) Fundamental rights
d) 7th Schedule
 4. For a citizen of India, the duty to pay taxes is a ;
a) Fundamental duty
b) Legal obligation
c) Constitutional obligation
d) Moral obligation
 5. Which of the following statements regarding the pardoning Powers of the President is incorrect?
a) Pardoning power of the president is restricted.
b) President can completely pardon any sentence
c) The power to pardon is the discretionary power of President
d) None of these.

6. Which one of the following is responsible for the preparation and presentation of union budget of the parliament?
a) Department of Revenue
b) Department of Economic Affairs
c) Department of Expenditure
d) None of these
7. It is not a kind of trademark:
a) Designs
b) Sounds
c) Symbols
d) Good will
8. These are not trade secrets
a) Formulas
b) Principles
c) Devices
d) None of these
9. Stealing of intellectual property means
a) Cooking
b) Forging
c) Plagiarism
d) Symbols
10. Cooking means
a) Boiling under pressure
b) Making deceptive statements
c) Retaining results with fit the theory
d) Misleading the public about the quality of a product.
11. This is not dishonesty in engineering
a) Forging
b) Blending
c) Trimming
d) Cooking
12. One of the ways of reducing the risk is
a) Complex interaction
b) Tight coupling
c) Normalization of deviance
d) Changing the working system.
13. The members of the Constituent Assembly which drafted the constitution of India were,
a) Nominated by the British parliament
b) Nominated by the Governor General
c) Elected by the Legislative Assemblies of various provinces
d) Elected by the Indian National Congress and Muslim league.
14. Which one of the following determines that the Indian constitution is federal?
a) A written and rigid constitution
b) An independent judiciary
c) Vesting of residuary powers with the centre
d) Distribution of powers between the centre and the state.

15. The Indian parliamentary system is different from the British parliamentary system in which of the following respects?
- a) Both a real and a nominal executive b) A system of collective responsibility
c) Bicameral legislature d) A different judicial review
16. Which one of the following objectives is not embodied in the Preamble to the Constitution of India?
- a) Liberty of thought b) Economic liberty
c) Liberty of expression d) Liberty of belief
17. The mind of the makers of the Constitution of India is reflected in which of the following?
- a) The Preamble
b) The Fundamental Rights
c) The Directive Principles of State policy
d) The fundamental duties.
18. Which one of the following rights was described by Dr. B.R. Ambedkar as the heart and soul of the Constitution?
- a) Right to freedom of religion b) Right to property
c) Right to equality d) Right to constitutional remedies.
19. Which of the following statement is incorrect regarding budget?
- a) The term 'Budget' is not explicitly stated in Indian Constitution
b) The Budget can be introduced in Lok Sabha only
c) The introduction of budget required recommendation of the President
d) The Budget is passed like an ordinary bill in the parliament.
20. The power of the Supreme Court of India to decide disputes between the Centre and the States falls under its;
- a) Advisory jurisdiction b) Appellate jurisdiction
c) Original jurisdiction d) Constitutional jurisdiction
21. The power to increase the number of judges in the Supreme Court of India is vested in;
- a) The President of India b) The Parliament
c) The Chief Justice of India d) The Law Commission.
22. There is a Parliamentary System of Government in India because the
- a) Lok Sabha is elected directly by the people
b) Parliament can amend the Constitution
c) Rajya Sabha cannot be dissolved
d) Council of Ministers is responsible to the Lok Sabha
23. Appointment, posting and promotion of district judge in a state are made by the
- a) Governor in consultation with the High Court
b) Chief Justice of the High Court of that state in consultation with the Governor
c) President in consultation with the High Court
d) President in consultation with the Governor and the High Court.

24. Notifications in respect of by-elections to the Lok Sabha are issued by the
a) Election commission
b) Speaker of Lok Sabha
c) The Whip
d) No notification is required for by-election.
25. With reference to 'None of the Above (NOTA)' option on electronic voting machines and ballot papers, consider the following statements :
I) The Citizens of India have the right to negative vote by exercising the 'None of the Above' option in EVMs and ballot papers.
II) If NOTA gets the highest votes in an election, then the election is conducted again.
a) I only
b) I and II
c) II only
d) None of these
26. With reference to 73rd Amendment Act of the constitution, a Grama Sabha is a body consisting of
a) All the adult population of the Village under the Panchayat
b) The whole population of the villages under the Panchayat other than children less than five years of age.
c) The registered voters of the villages under the Panchayat
d) None of the above.
27. Which of the following is not taken as the aim of engineering ethics?
a) Moral imagination
b) Recognition of ethical issues
c) Sense of responsibility
d) Shifting of responsibility
28. Which of the following is not a concept of responsibility?
a) Minimalist
b) Maximalist
c) Reasonable care
d) Good works
29. Corrupt Professional Judgment leads to
a) Integrity in R&D
b) Reliability
c) Conflict of interest
d) None of these
30. The formulate of a soft drink is an example of
a) Copy Right
b) Trade Secret
c) Patent
d) Trade Marks

CBCS SCHEME

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17KKM39/49
Question Paper Version : D

Third/Fourth Semester B.E. Degree Examination, June/July 2019

ಕನ್ನಡ ಮನಸು

(COMMON TO ALL BRANCHES)

Time: 2 hrs.]

[Max. Marks: 30

ಸೂಚನೆಗಳು

1. ಎಲ್ಲ ೩೦ ಪ್ರಶ್ನೆಗಳಿಗೂ ಉತ್ತರಿಸಿರಿ. ಪ್ರತಿ ಪ್ರಶ್ನೆಗೆ ಒಂದು ಅಂಕ.
2. ಓ.ಎಂ.ಆರ್ ಉತ್ತರ ಪತ್ರಿಕೆಯಲ್ಲಿ ಯು.ಎಸ್.ಎನ್ ಸಂಖ್ಯೆ ಹಾಗೂ ಪಶ್ಚಿಮ ಪತ್ರಿಕೆಯ ಶ್ರೇಣಿಯನ್ನು ಅಂದರೆ A, B, C ಅಥವಾ D ಯನ್ನು ತಪ್ಪಿಲ್ಲದಂತೆ ಕಡ್ಡಾಯವಾಗಿ ಗುರುತಿಸುವುದು ಅಭ್ಯರ್ಥಿಯ ಜವಾಬ್ದಾರಿಯಾಗಿರುತ್ತದೆ.
3. ಓ.ಎಂ.ಆರ್ ಉತ್ತರ ಪತ್ರಿಕೆಯಲ್ಲಿ ನಿಗದಿಪಡಿಸಿರುವ ಸ್ಥಳದಲ್ಲಿ ಭರ್ತಿಮಾಡದೆ ಹಾಗೆಯೇ ಬಿಟ್ಟಲ್ಲಿ ಅಥವಾ ಭರ್ತಿಮಾಡಿದ ಮಾಹಿತಿಯಲ್ಲಿ ಯಾವುದೇ ವ್ಯತ್ಯಾಸವಿದ್ದಲ್ಲಿ ಅಂತಹ ಉತ್ತರ ಪತ್ರಿಕೆಗಳನ್ನು ರದ್ದು ಹೊರಿಸಲಾಗುವುದು.
4. ಕೇಷಲ ಒಂದು ಉತ್ತರವನ್ನು ಮಾತ್ರ ಉತ್ತರ ಪತ್ರಿಕೆಯಲ್ಲಿ ಗುರುತಿಸತಕ್ಕದ್ದು. ಒಂದೆ ಪ್ರಶ್ನೆಗೆ ಎರಡು ಉತ್ತರವನ್ನು ಗುರುತಿಸುವುದು ಅಮಾನ್ಯ.
5. ಎಲ್ಲಾ ಉತ್ತರಗಳನ್ನು ನಿಮಗೆ ಒದಗಿಸಲಾದ ಓ.ಎಂ.ಆರ್ ಉತ್ತರ ಪತ್ರಿಕೆಯ ಹಾಳೆಯ ಮೇಲೆ ಕಷ್ಟ ಅಥವಾ ನೀಲಿ ಶಾಹಿಯ ಬಾಲ್‌ಪಾಯಿಂಟ್ ಪೆನ್ನಿನಿಂದ ಗುರುತು ಮಾಡಬೇಕು.

1. ವಿಶ್ವಾಮಿತ್ರ ತ್ರಿಶಂಕುವಿಗಾಗಿ ಇದನ್ನು ನಿರ್ಮಿಸಿದನೆಂದು ಗೊರೂರು ಹೇಳಿದ್ದಾರೆ.
ಅ) ಪಾಕಿಸ್ತಾನ ಬ) ಎಮ್ಮೆ ಕ) ಈಚಲು ಮರ ಡ) ತ್ರಿಶಂಕು ಸ್ವರ್ಗ.
2. "ಮಹಿಷ ಮಂಡಲ" ಎಂದರೆ
ಅ) ಆಂಧ್ರ ಪ್ರದೇಶ ಬ) ನಭೋಮಂಡಲ ಕ) ಮೈಸೂರು ಡ) ಚಿತ್ರದುರ್ಗ.
3. ಬಿ.ಜಿ. ಎಲ್ ಸ್ವಾಮಿಯವರಿಗೆ ಕೇಂದ್ರ ಸಾಹಿತ್ಯ ಅಕಾಡೆಮಿ ಪ್ರಶಸ್ತಿ ತಂದುಕೊಟ್ಟ ಕೃತಿ
ಅ) ಕಾಲೇಜು ರಂಗ ಬ) ಹಸಿರು ಹೊನ್ನು ಕ) ನಾಕುತಂತಿ ಡ) ಅದಿರಂಗ ಪುರಾಣ.

4. ಅಗೋ ಚೆಲುವಿನ ರಾಣಿ ಬಂದಳು ಹೀಗೆ ಕೂಗಿದ ಬೆಡ್
ಅ) ನಾಲ್ಕನೇ ಬ) ಐದನೇ ಕ) ಆರನೇ ಡ) ಏಳನೇ.
5. ಗೂರೂರರ ಪ್ರಕಾರ ಕಲಿಯುಗದಲ್ಲಿ ಬೇಕಾಗಿರುವ ಗುಣ
ಅ) ಕೆಂಪುಗುಣ ಬ) ಸಾತ್ವಿಕ ಗುಣ ಕ) ತಾಮಸ ಗುಣ ಡ) ರಾಜಸಗುಣ.
6. ನೇಣುಗಂಬವ ಕೂಡ ದಿಕ್ಕರಿಸಿ ನುಗ್ಗುವರು - ಇದು ಯಾವ ಕವನದ ಸಾಲು
ಅ) ರೋಟ್ಟಿ ಮತ್ತು ಕೋವಿ ಬ) ಶ್ರಾವಣ ಕ) ಬೆಳ್ಳಿಯ ಹಾಡು ಡ) ಬೇಂದ್ರೆ ಕವನ.
7. ಕಜ್ಜ - ಇದರ ತತ್ಸಮ ರೂಪ
ಅ) ಕಾಯ ಬ) ಕಾವ್ಯ ಕ) ಕರ್ತೃ ಡ) ಕಾರ್ಯ.
8. ಕತ್ತಿಮನೆ - ಇದು
ಅ) ಜೋಡಿಪದ ಬ) ಸಂಬಂಧಿತ ಪದಗುಂಪು ಕ) ನುಡಿಗಟ್ಟು ಡ) ದ್ವಿರುಕ್ತಿ ಪದ.
9. "ಅಟ್ಟಕ್ಕೇರಿಸು" - ಈ ನುಡಿಗಟ್ಟಿನ ವಿಶೇಷಾರ್ಥ
ಅ) ಮೇಲೆಹತ್ತು ಬ) ಹೊಗಳು ಕ) ಅಟ್ಟಕ್ಕೇ ಹೇರಲು ಸಹಕರಿಸು ಡ) ಮೇಲಕ್ಕೆ ಹತ್ತಿಸಬೇಕು.
10. ನೋಡಿದಳು - ಇದರ ನೆಷೇದಾರ್ಥ
ಅ) ನೋಡಳು ಬ) ನೋಡುತ್ತಿದ್ದಳು ಕ) ನೋಡಿದ್ದಳು ಡ) ನೋಡುತ್ತಾಳೆ.
11. ಕಲಿಭೀಮನೆ - ಇದರ ವಿಭಕ್ತಿ
ಅ) ಚತುರ್ಥಿ ಬ) ದ್ವಿತೀಯಾ ಕ) ಸಂಭೋಧಾನಾ ಡ) ಸಪ್ತಮಿ .
12. ಮೂಡಣ - ವಿರುದ್ಧ ಪದ
ಅ) ಪಡುವಣ ಬ) ತೆಂಕಣ ಕ) ಬಡಗಣ ಡ) ಮೂಡಣ

13. ದ.ರಾ.ಬೇಂದ್ರೆಯವರ ಕಾವ್ಯನಾಮ
ಅ) ಅಂಬಿಕಾತನಯ ದತ್ತ ಬ) ವಿನಾಯಕ ಕ) ಆನಂದಕಂದ ಡ) ಕಡತೀರದ ಭಾರ್ಗವ
14. ಹೊಳೆಗೆ ಮತ್ತು ಮಳೆಗೆ ಆಗ್ಯದ ಲಗ್ನ ಇದು ಯಾವ ಕವನದ ಸಾಲು
ಅ) ರೋಷಿ ಮತ್ತು ಕೋವಿ ಬ) ಬೆಲ್ವಿಯ ಹಾಡು ಕ) ಶ್ರಾವಣ ಡ) ಎಲ್ಲಾ ಹುಡುಗಿಯರ ಕನಸು
15. ಭಗವಂತ ಮಾನವರಿಗೆ ಕಾಣಿಸಿಕೊಂಡರೆ ಮೊದಲು ಅನ್ನದ ರೂಪದಲ್ಲಿ ಕಾಣಿಸಿಕೊಳ್ಳಬೇಕು ಎಂದು ಹೇಳಿದವರು.
ಅ) ವಿಶ್ವೇಶ್ವರಯ್ಯ ಬ) ಕುವೆಂಪು ಕ) ಲಾ.ಬ. ಶಾಸ್ತ್ರಿ ಡ) ಗಾಂಧೀಜಿ
16. ಹಿಂದುಳಿದ ವರ್ಗಗಳಿಗೆ ಸರ್ಕಾರಿ ಕೆಲಸಗಳಲ್ಲಿ ಮೀಸಲಾತಿ ನೀಡಲು ನಾಲ್ವಡಿ ಕೃಷ್ಣರಾಜ ಒಡೆಯರು ರಚಿಸಿದ ಆಯೋಗ
ಅ) ಹಾವನೂರು ಆಯೋಗ ಬ) ವೆಂಕಟಸ್ವಾಮಿ ಆಯೋಗ
ಕ) ನಾಲ್ವಡಿ ಆಯೋಗ ಡ) ಮಿಲ್ಲರ್ ಆಯೋಗ
17. ಶಿವರಾಮ ಕಾರಂತರಿಗೆ ಜ್ಞಾನಪೀಠ ಪ್ರಶಸ್ತಿ ತಂದುಕೊಟ್ಟ ಕೃತಿ
ಅ) ಚೋಮನ ದುಡಿ ಬ) ಮರಳಿ ಮಣ್ಣಿಗೆ
ಕ) ಮೂಕಜ್ಜಿಯ ಕನಸುಗಳು ಡ) ಹುಚ್ಚ ಮನಸಿನ ಹತ್ತು ಮುಖಗಳು
18. ಕುವೆಂಪುರವರು ಅಣ್ಣಪ್ಪನನ್ನು ಹೀಗೆಂದಿದ್ದಾರೆ
ಅ) ಹಾಸ್ಯಗಾರ ಒ) ನಗೆಗಾರ ಕ) ಗೇಣಿದಾರ ಡ) ಕೂಲಿಕಾರ
19. ಪಿ. ಲಂಕೇಶರ ಈ ಕೃತಿಗೆ ಕೇಂದ್ರ ಸಾಹಿತ್ಯ ಅಕಾಡೆಮಿ ಪ್ರಶಸ್ತಿ ಬಂದಿದೆ.
ಅ) ಗುಣಮುಖ ಬ) ಸಂಕ್ರಾಂತಿ ಕ) ಕಲ್ಲು ಕರಗುವ ಸಮಯ ಡ) ಹುಳಿನೆನಪು.
20. ಎಲ್ಲಾರಂಥವನಲ್ಲ ನನ್ನಗಂಡ - ಎಂದು ಹಾಡಿದ ಸಂತ
ಅ) ಅಕ್ಕಮಹಾದೇವಿ ಬ) ಶಿಶುನಾಳ ಶರೀಫ ಕ) ಬಸವಣ್ಣ ಡ) ಸರ್ವಜ್ಞ.

21. ಪರಿಸರದ ಕತೆಯ ಲೇಖಕರು
ಅ) ಬಿ.ಜಿ. ಎಲ್ ಸ್ವಾಮಿ ಬ) ಕುವೆಂಪು ಬೇಂದ್ರೆ ಕ) ಬೇಂದ್ರೆ ಡ) ಪೂರ್ಣಚಂದ್ರ ತೇಜಸ್ವಿ
22. "ಗಾಂಧಿ" ಕಥೆಗಾರ
ಅ) ಬೆಸಗರಹಳ್ಳಿ ರಾಮಣ್ಣ ಬ) ಪಿ. ಲಂಕೇಶ ಕ) ಯೂ. ಆರ್. ಆನಮತಮೂರ್ತಿ ಡ) ಕುವೆಂಪು
23. ಸಾವಿರಾರು ನದಿಗಳು ಕವನ ಸಂಕಲದ ಕವಿ
ಅ) ಸು. ರಂ. ಎಕ್ಕುಂಡಿ ಔ) ಕೆ.ಎಸ್. ನಿಸಾರ್ ಅಹಮದ್ ಕ) ಸಿದ್ದಲಿಂಗಯ್ಯ ಡ) ಬೇಂದ್ರೆ.
24. ವಿಶ್ವಾಮಿತ್ರನನ್ನು ಗೊರೂರು ಹೀಗೆಂದು ಕರೆದಿದ್ದಾರೆ.
ಅ) ಕ್ರಾಂತಿಕಾರ ಬ) ಸೃಷ್ಟಿಕಾರ ಕ) ಸಮಗಾರ ಡ) ಯವೂದೂ ಅಲ್ಲ.
25. "ನೀರು" ಕಥೆ ಈ ನದಿ ವಿವಾದದ ಬಗ್ಗೆ ಅರಿವೂ ಮಾಡಿಸುತ್ತದೆ.
ಅ) ಮಹಾದಾಯಿ ಬ) ಭೀಮ ಕ) ಕಾವೇರಿ ಡ) ನೇತ್ರಾವತಿ.
26. ಮೈಸೂರು ರಾಜ್ಯಕ್ಕೆ ಕರ್ನಾಟಕ ಎಂದು ನಾಮಕರಣ ಮಾಡಿದ ವರ್ಷ
ಅ) 1956 ಬ) 1971 ಕ) 1975 ಡ) 1973.
27. ಮೆಲ್ಲಮೆಲ್ಲನೆ - ಇದು
ಅ) ದ್ವಿರುಕ್ತಿ ಬ) ಜೋಡುನುಡಿ ಕ) ಅನುಕರಣ ಅವ್ಯಯ ಡ) ಯಾವುದೂ ಅಲ್ಲ
28. "ಮಕ್ಕಳು ಮರಿ" - ಇದು
ಅ) ದ್ವಿರುಕ್ತಿ ಬ) ಪ್ರತ್ಯಯ ರೂಪ ಕ) ಜೋಡುನುಡಿ ಡ) ಅನುಕರಣ ಪದ
29. ಗಳಗಳನೆ - ಇದು
ಅ) ಅನುದರಣ ಅವ್ಯಯ ಬ) ದ್ವಿರುಕ್ತಿ ಕ) ಜೋಡುನುಡಿ ಪದ ಡ) ಸಂಭಾಂಧ ವಾಚದ ಪದ
30. ಆಕಾಶ - ಇದರ ತತ್ವವ ರೂಪ
ಅ) ಆಗಸ ಬ) ಅಗಸ ಕ) ಆಕಾಶ ಡ) ಆಗಾಸ.

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Question Paper Version : C

Third/Fourth Semester B.E. Degree Examination, June/July 2019
Kannada Kali

(COMMON TO ALL BRANCHES)

Time: 2 hrs.]

[Max. Marks: 30

INSTRUCTIONS TO THE CANDIDATES

1. Answer all the thirty questions, each question carries **ONE** mark.
2. Use only **Black ball point pen** for writing / darkening the circles.
3. **For each question, after selecting your answer, darken the appropriate circle corresponding to the same question number on the OMR sheet.**
4. Darkening two circles for the same question makes the answer invalid.
5. **Damaging/overwriting, use of whiteners** on the **OMR** sheets is strictly prohibited.

Note : Translate the following English words to Kannada
[from Q No. 1 to 5]

1. Curd: _____
a) Majjige b) Anna c) Sambar d) Mosaru
2. Grass: _____
a) Hullu b) Hallu c) Bellu d) Mullu
3. To laugh: _____
a)Hogu b) Nagu c) Bidu d) Magu
4. Hot water: _____
a) Tanneru b) Bella c) Bisi neeru d) Hasiru
5. Lesson: _____
a) Paata b) Nota c) Parisara d) Jagala

Note : Write the English word for given Kannada word. [From Q No. 6 to 9]

6. Vayasu: _____
a) Year b) Month c) Week d) Age
7. Tarakari: _____
a) Fresh b) Lemon c) Vegetable d) Potato
8. Gottu: _____
a) Know b) Like c) Dark d) Cold
9. Adigemane : _____
a) Bath room b) Kitchen c) Street d) Hall

Note : Substitute the words from the following each sentence in appropriate place. [From Q No. 10 to 12]

10. Doctor Aushadi _____ (kodu)
a) Heltare b) Kottaru c) Sigtare d) Kelu
11. Leela ivattu bengalurige _____ (Hogu)
a) Hoguttane b) Hoguttale c) ide d) Howdu
12. TV _____ tale novu baruttade. (Nodu)
a) Odidare b) Kelidre c) Nodidre d) Idre

Note : Translate the Kannada word into English. [From Q No. 13 to 22]

13. Maralu: _____
a) Land b) Sand c) People d) Bank
14. Samparka: _____
a) Run b) Father c) Contact d) Doubt
15. Hatti: _____
a) Cotton b) Bread c) Jar d) King

16. Parisara: _____
a) Daily b) Class c) Duty d) Environment
17. Tota: _____
a) Tall b) Strong c) Garden d) Like
18. Jwara: _____
a) Meal b) Fever c) Gruel d) Month
19. Raita: _____
a) Thieves b) Grass c) Farmer d) Field
20. Kaanu: _____
a) To see b) To ask c) To keep d) To play
21. Roodhi: _____
a) Teeth b) Practise c) Hot water d) Learn
22. Paata: _____
a) Tour b) Lesson c) Poor d) Happy

Note : Fill in the blank choosing the right word from the group below :

23. Neevu Hege _____ ?
a) Iddare b) Iddiri c) Iddale d) Iddi

**Note : Translate the following Kannada question into English.
[from question No. 24 to 25]**

24. Aa Pustaka olleyadu.
a) Which book is good? b) That book is good.
c) My book is good. d) Her book is bad.
25. Naanu beligge Edde.
a) I got up late. b) I got up in the morning.
c) I like sleeping. d) He woke up late.

Note : Fill in the blank by translating the given English word to Kannada.
[From Question No : 26 to 30]

26. Country: _____
a) Desha b) Vesha c) Rajya d) Taluk
27. Girl: _____
a) Huduga b) Ganda c) Hudugi d) Badagi
28. Mother: _____
a) Tande b) Tayi c) Magalu d) Hendati
29. Circular: _____
a) Chowka b) Aayatha c) Vrittakara d) Udda
30. Gold: _____
a) Chinna b) Belli c) Vajra d) Havala

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