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17MAT31

**Third Semester B.E. Degree Examination, Dec.2018/Jan.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. Find the Fourier series expansion for the periodic function $f(x)$, if in one second
- $$f(x) = \begin{cases} 0; & -\pi < x < 0 \\ x; & 0 < x < \pi \end{cases} \quad (08 \text{ Marks})$$
- b. Expand the function $f(x) = x(\pi-x)$ over the interval $(0, \pi)$ in half range Fourier cosine series. (06 Marks)
- c. The following value of function y gives the displacement in inches of a certain machine part for rotations x of a flywheel. Expand y -in terms of Fourier series upto the second harmonic.

Rotations	x	0	$\pi/6$	$2\pi/6$	$3\pi/6$	$4\pi/6$	$5\pi/6$	π
Displacement	y	0	9.2	14.4	17.8	17.3	11.7	0

(06 Marks)

OR

- 2 a. Find the Fourier series expansion for the function :
- $$f(x) = \begin{cases} \pi x; & 0 \leq x \leq 1 \\ \pi(2-x); & 1 \leq x \leq 2 \end{cases}$$
- and deduce $\frac{\pi^2}{8} = \sum_{n=1}^{\infty} \frac{1}{(2n-1)^2}$. (08 Marks)
- b. Expand in Fourier series $f(x) = (\pi-x)^2$ over the interval $0 \leq x \leq 2\pi$. (06 Marks)
- c. The following table gives the variations of periodic current over a period T .

t (secs)	0	$T/6$	$T/3$	$T/2$	$2T/3$	$5T/6$	T
A (Amps)	1.98	1.30	1.05	1.30	-0.88	-0.25	1.98

Expand the function (periodic current) by Fourier series and show that there is a direct current part of 0.75 amp and also obtain amplitude of first harmonic. (06 Marks)

Module-2

- 3 a. Find Fourier transform of $f(x) = \begin{cases} 1-x^2; & |x| < 1 \\ 0; & |x| > 1 \end{cases}$
- and hence evaluate $\int_0^{\infty} \frac{x \cos x - \sin x}{x^3} dx$. (08 Marks)
- b. Find Fourier Cosine transform of the function :
- $$f(x) = \begin{cases} 4x; & 0 < x < 1 \\ 4-x; & 1 < x < 4 \\ 0; & x > 4 \end{cases} \quad (06 \text{ Marks})$$
- c. Find z-transforms of: i) $a^n \sin n\theta$ ii) $a^{-n} \cos n\theta$. (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

- 4 a. Find Fourier sine transform of $f(x) = e^{-|x|}$ and hence evaluate : $\int_0^{\infty} \frac{x \sin mx}{1+x^2} dx, m > 0$. (08 Marks)
- b. Find z-transform of $u_n = \cos h\left(\frac{n\pi}{2} + \theta\right)$. (06 Marks)
- c. Solve the difference equation using z-transforms $u_{n+2} + 6u_{n+1} + 9u_n = 2^n$. Given $u_0 = u_1 = 0$. (06 Marks)

Module-3

- 5 a. If θ is the acute angle between the two regression lines relating the variables x and y , show that $\text{Tan}\theta = \left(\frac{1-r^2}{r}\right) \left(\frac{\sigma_x \sigma_y}{\sigma_x^2 \sigma_y^2}\right)$. (08 Marks)
- Indicate the significance of the cases $r = \pm 1$ and $r = 0$.
- b. Fit a straight line $y = ax + b$ for the data.
- | | | | | |
|---|----|----|-----|-----|
| x | 12 | 15 | 21 | 25 |
| y | 50 | 70 | 100 | 120 |
- (06 Marks)
- c. Find a real root of the equation by using Newton-Raphson method near $x = 0.5$, $xe^x = 2$, perform three iterations. (06 Marks)

OR

- 6 a. Compute the coefficient of correlation and equation of regression of lines for the data :
- | | | | | | | | |
|---|---|---|----|----|----|----|----|
| x | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| y | 9 | 8 | 10 | 12 | 11 | 13 | 14 |
- (08 Marks)
- b. The Growth of an organism after x – hours is given in the following table :
- | | | | | | | |
|------------|----|----|----|----|----|----|
| x (hours) | 5 | 15 | 20 | 30 | 35 | 40 |
| y (Growth) | 10 | 14 | 25 | 40 | 50 | 62 |
- Find the best values of a and b in the formula $y = ae^{bx}$ to fit this data. (06 Marks)
- c. Find a real root of the equation $\cos x = 3x - 1$ correct to three decimals by using Regula – False position method, given that root lies in between 0.6 and 0.7. Perform three iterations. (06 Marks)

Module-4

- 7 a. Find $y(8)$ from $y(1) = 24$, $y(3) = 120$, $y(5) = 336$, $y(7) = 720$ by using Newton's backward difference interpolation formula. (08 Marks)
- b. Define $f(x)$ – as a polynomial in x for the following data using Newton's divided difference formula. (06 Marks)

x	-4	-1	0	2	5
f(x)	1245	33	5	9	1335

- c. Evaluate the integral $I = \int_0^6 \frac{dx}{4x+5}$ using Simpson's $\frac{1}{3}$ rd rule using 7 ordinates. (06 Marks)

OR

- 8 a. For the following data calculate the differences and obtain backward difference interpolation polynomial. Hence find $f(0.35)$. (08 Marks)

x	0.1	0.2	0.3	0.4	0.5
f(x)	1.40	1.56	1.76	2.0	2.28

- b. Using Lagrange's interpolation find y when $x = 10$.

x	5	6	9	11
y	12	13	14	16

- c. Evaluate $\int_0^1 \frac{x}{1+x^2} dx$ by Weddle's rule considering seven ordinates. (06 Marks)

Module-5

- 9 a. Verify the Green's theorem in the plane for $\int_C (x^2 + y^2)dx + 3x^2y dy$ where C – is the circle $x^2 + y^2 = 4$ traced in positive sense. (08 Marks)
- b. Evaluate $\int_C (\sin z dx - \cos x dy + \sin y dz)$ by using Stokes theorem, where C – is the boundary of the rectangle $0 \leq x \leq \pi$, $0 \leq y \leq 1$ and $z = 3$. (06 Marks)
- c. Find the curve on which the functional : $\int_0^1 [y'^2 + 12xy]dx$ with $y(0) = 0$, $y(1) = 1$ can be extremised. (06 Marks)

OR

- 10 a. Given $f = (3x^2 - y)i + xzj + (yz - x)k$ evaluate $\int_C f \cdot dr$ from $(0, 0, 0)$ to $(1, 1, 1)$ along the paths $x = t$, $y = t^2$ and $z = t^3$. (08 Marks)
- b. Derive Euler's equation in the form $\frac{\partial f}{\partial y} - \frac{d}{dx} \left(\frac{\partial f}{\partial y'} \right) = 0$. (06 Marks)
- c. Prove that the shortest distance between two points in a plane is a straight line. (06 Marks)

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Third Semester B.E. Degree Examination, Dec.2018/Jan.2019 Strength of Materials

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Show that volumetric strain is equal to algebraic sum of the strains in three mutually perpendicular directions in case of cuboid. (05 Marks)
- b. Calculate the diameter of steel rod needed to carry a load of 8 kN, if the extension is not to exceed 0.04 percent. Assume $E = 210 \text{ GN/m}^2$. (05 Marks)
- c. A reinforced concrete column $300 \text{ mm} \times 300 \text{ mm}$ in size has 4 reinforcement bars of steel 20 mm in diameter. Calculate the safe load, the column can carry if the permissible stress in concrete is 5.2 MN/mm^2 , $\frac{f_{\text{steel}}}{E_{\text{concrete}}} = 18$. (10 Marks)

OR

- 2 a. Derive an expression for change in length in case of a uniformly varying circular cross section whose diameter varies from d_1 to d_2 over a length 'L' subjected to an axial force F. (06 Marks)
- b. A rod is 2 m long at a temperature of 10°C . Find the expansion of the rod when the temperature is raised to 80°C . If this expansion is prevented, find the stress induced in the material of the rod. Take $E = 1.0 \times 10^5 \text{ MPa}$ and $\alpha = 12 \times 10^{-6} / ^\circ\text{C}$. (05 Marks)
- c. A bar of cross section $10 \text{ mm} \times 10 \text{ mm}$ is subjected to an axial pull of 8000 N. The lateral dimension of the bar is found to be changed to $9.9985 \text{ mm} \times 9.9985 \text{ mm}$. If the modulus of rigidity is $0.8 \times 10^5 \text{ N/mm}^2$, determine the Poisson's ratio and modulus of elasticity. (09 Marks)

Module-2

- 3 a. Derive expressions for hoop stress and longitudinal stress in case of thin cylinder. (08 Marks)
- b. At a point in a strained material the stresses acting are as shown in Fig. Q3 (b). Determine the (i) Principal stresses and their planes (ii) Maximum shear stress and their planes (iii) Normal and shear stresses on the inclined plane AB. (12 Marks)

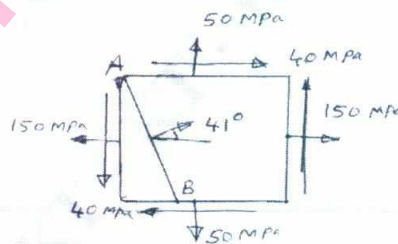


Fig. Q3 (b)

OR

- 4 a. At a point in a strained material the normal stresses are σ_x and σ_y which are tensile in nature and shear stress acting is τ_{xy} , derive expressions for normal stress and shear stress on an inclined plane making an angle ' θ ' with the vertical plane. (10 Marks)
- b. The inside diameter of thick cylinder is 200 mm. If the internal pressure is 8 N/mm^2 and maximum permissible stress in cylinder wall is 20 N/mm^2 , what is the minimum thickness required. If the internal pressure is to be increased to 12 N/mm^2 without exceeding maximum stress, what is the external pressure to be applied? (10 Marks)

Module-3

- 5 a. A cantilever of length 'l' is subjected to a load intensity of w/m at fixed end, uniformly varying to zero at free end. Considering a section 'X' at a distance 'x' from free end, write shear force and bending moment equations and using them draw shear force diagram and bending moment diagram. (10 Marks)
- b. Draw shear force diagram and bending moment diagram for the Cantilever beam shown in Fig. Q5 (b). (10 Marks)

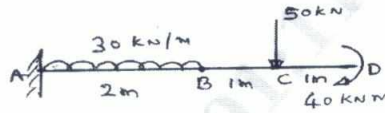


Fig. Q5 (b)

OR

- 6 a. What is Pure bending? Explain with examples. (05 Marks)
- b. Draw shear force diagram and bending moment diagram for the beam shown in Fig. Q6 (b). (15 Marks)

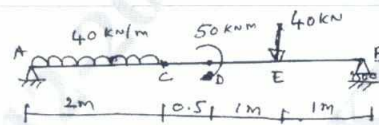


Fig. Q6 (b)

Module-4

- 7 a. Explain maximum strain energy theory (Beltrami and Haigh). (05 Marks)
- b. Derive the expression for power transmitted by the shaft. (05 Marks)
- c. A solid shaft has to transmit 120 kW of power at 160 rpm. If the shear stress is not to exceed 60 MPa and the twist in a length of 3 m must not exceed 1° , find the suitable diameter of the shaft. $G = 80 \text{ GPa}$. (10 Marks)

OR

- 8 a. Derive with usual notations the torsion equation. (10 Marks)
- $$\frac{T}{J} = \frac{\tau_{\max}}{R} = \frac{G\theta}{L}$$
- b. The cross section of a bolt is required to resist an axial tension of 15 kN and a transverse shear of 15 kN. Estimate the diameter of the bolt by (i) Maximum principal stress theory and (ii) Maximum shear stress theory. The elastic limit of the material is 300 N/mm^2 . Poisson's ratio = 0.25 and factor of safety = 3. (10 Marks)

Module-5

- 9 a. Derive Euler's crippling load when both ends of column are hinged. (06 Marks)
- b. A horizontal beam of the section shown in Fig. Q9 (b) is 4 m long and is simply supported at the ends. Find the maximum uniformly distributed load it can carry if the compressive and tensile stresses are not to exceed 60 MPa and 30 MPa respectively. (14 Marks)

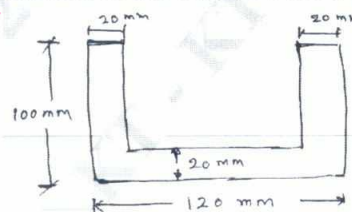


Fig. Q9 (b)

OR

- 10 a. Define : (i) Neutral axis (ii) Section modulus (iii) Flexural rigidity (iv) Moment of resistance (08 Marks)
- b. Compare the crippling loads as found from Euler's and Rankine's formula for a mild steel tube of length 3 m, of internal diameter 5 cm and thickness of metal 0.25 cm. Both ends are pin jointed. $E = 2.1 \times 10^2 \text{ KN/mm}^2$. Take $\alpha = \frac{1}{7500}$, $\sigma_c = 300 \text{ N/mm}^2$. (12 Marks)

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17CV33

Third Semester B.E. Degree Examination, Dec.2018/Jan.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
- Define the term 'fluid'. Distinguish between liquid and gases. (06 Marks)
 - Derive the expression for surface tension on a liquid droplet. (06 Marks)
 - The dynamic viscosity of an oil, used for lubrication between a shaft and sleeve is 0.6Ns/m^2 . The shaft diameter is 0.4m and rotates at 190rpm. Calculate the power lost in the bearing a sleeve length of 90mm. Take the thickness of the 0:1 film as 1.5mm. (08 Marks)

OR

- 2
- Explain the working of a Bourdon's pressure gauge with a diagram. (06 Marks)
 - State and prove Pascal's law. (08 Marks)
 - A differential manometer is connected at the two points A and B of two pipes as shown in Fig.Q.2(c). The pipe A contains a liquid of sp.gr = 1.5 while pipe B contains a liquid of sp.gr = 0.9. The pressures at A and B are $9.81 \times 10^4 \text{N/m}^2$ and 17.65N/m^2 respectively. Find the difference in mercury level in the differential manometer. (06 Marks)

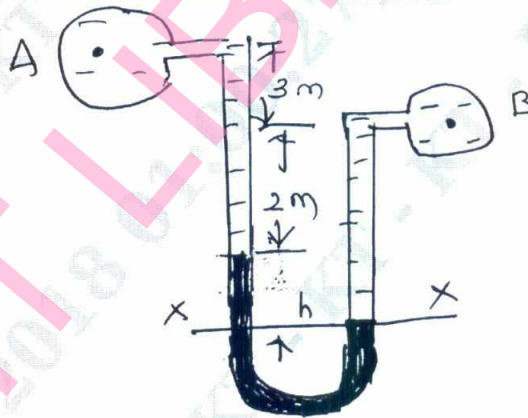


Fig.Q.2(c)

Module-2

- 3
- Define: i) Total pressure ii) Centre of pressure. (04 Marks)
 - Derive the expression for the total pressure and center of pressure on a vertically immersed plane surface. (08 Marks)
 - The velocity potential function $\phi = \frac{-xy^3}{3} - x^2 + x^3y + y^2$.
 - Find the velocity component in x and y directions.
 - Show that ϕ represents a possible case of fluid flow. (08 Marks)

OR

- 4 a. Derive continuity equation in Cartesian coordinates for 3 dimensional flow. (08 Marks)
 b. A rectangular plane surface 1m wide and 3m deep lies in water in such a way that its plane makes an angle of 30° with the free surface of water. Determine the total pressure and the depth of center of pressure when the upper edge of the plate is 2m below the free surface. (06 Marks)
 c. What is flownet? The stream function for a two dimensional flow is given by $\psi = 2xy$. Find the velocity potential function ' ϕ '. (06 Marks)

Module-3

- 5 a. State the assumptions made in deriving the Euler's equation of motion. Hence obtain Bernoulli's equation from Euler's equation with a neat sketch. (10 Marks)
 b. A pipe of diameter 400mm carries water at a velocity of 25m/s. The pressure at the points A and B are given as 29.43 N/cm^2 and 22.563 N/cm^2 respectively, while the datum head at A and B are 28m and 30m. Find the loss of head between A and B. (05 Marks)
 c. Show that for a pitot tube actual velocity $V = C_v \sqrt{yh}$ with usual notations. (05 Marks)

OR

- 6 a. Derive the equation for discharge through a venturimeter. (08 Marks)
 b. Water flow at the rate of $0.147 \text{ m}^3/\text{s}$ through a 150mm diameter orifice inserted in a 300mm diameter pipe. If the pressure gauges fitted upstream and down stream of the orifice plate have shown readings of 176.58 kN/m^2 and 88.29 kN/m^2 respectively, find the coefficient of discharge 'C' of the orifice meter. (05 Marks)
 c. A 45° reducing bend is connected in a pipe line, the diameters at the inlet and outlet of the bend being 600mm and 300mm respectively. Find the force exerted by water on the bend if the pressure intensity at the inlet to the bend is 8.829 N/cm^2 and rate of flow of water is 600 lit/sec. (07 Marks)

Module-4

- 7 a. Define hydraulic coefficient C_c , C_v and C_d for an orifice and obtain the relation between them. (08 Marks)
 b. Derive the expression of discharge through a triangular notch. (08 Marks)
 c. Find the discharge over a Cipolletti weir of length 2.0m when the head over the weir is 1m. Take $C_d = 0.62$. (04 Marks)

OR

- 8 a. What are the advantages of triangular notch over rectangular notch? How do you classify mouth pieces? (06 Marks)
 b. A jet of water, issuing from a sharp-edged vertical orifice under a constant head of 10.0cm at a certain point, has the horizontal and vertical coordinates measured from the Vena-Contracta as 20.0cm and 10.5cm respectively. Find the value of C_v . Also find the value of C_c if $C_d = 0.60$. (06 Marks)
 c. What is broad crested weir? Show that under maximum discharge conditions $h = 2/3 H$ with usual notations for a broad crested weir. (08 Marks)

Module-5

- 9 a. Derive Darcy's equation for head loss through pipes. (08 Marks)
 b. Explain: i) Pipes in parallel ii) Pipes in series. (04 Marks)
 c. The rate of water flow of water through a horizontal pipe is $0.025 \text{ m}^3/\text{s}$. The diameter of the pipe which is 200mm is suddenly enlarged to 4000mm. The pressure intensity in the smaller pipe is 11.772 N/cm^2 . Compute:
 i) Loss of head due to sudden enlargement
 ii) Pressure intensity in the large pipe. (08 Marks)

OR

- 10 a. Explain the terms:
 i) Hydraulic gradient and
 ii) Total energy line. (04 Marks)
 b. Derive the expression for pressure loss due to sudden closure of the valve when the pipe is elastic. (08 Marks)
 c. For a pipe network shown in Fig.Q.10(c) find the flow in each pipe. The value of 'n' mg/c assumed as 2.0. (08 Marks)

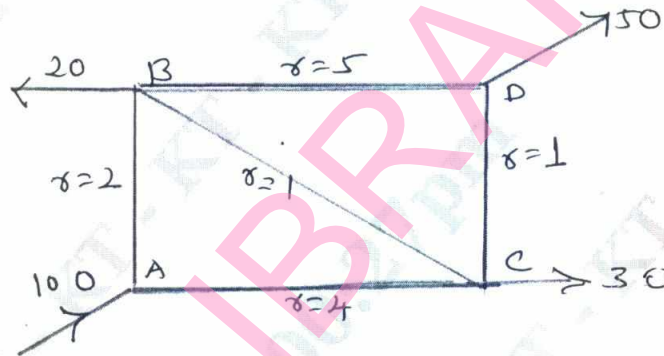


Fig.Q.10(c)

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17CV34

Third Semester B.E. Degree Examination, Dec.2018/Jan.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. Define surveying. Enumerate the applications of surveying. (10 Marks)
 b. Discuss the classification of surveying. (10 Marks)

OR

- 2 a. Explain Indirect method of ranging with a sketch. (10 Marks)
 b. A big pond obstructs the chain line AB. A line AL was measured on the left of the line AB for circumventing the obstacle. The length of AL was 901 m. Similarly the line AM was measured on the right of the line AB whose length was 1100 m. Points M, B, L are in straight line. Length's of the links BL and BM are 502 m and 548 m respectively. Find the distance AB. (10 Marks)

Module-2

- 3 a. Distinguish between:
 i) True meridian and magnetic meridian
 ii) Whole Circle bearing and Quadrantal bearing. (05 Marks)
 b. A closed compass traverse ABCDEA was conducted round a forest and the following bearings were observed with a compass. Calculate the interior angles. Apply check and plot the traverse (not to scale).

Line	AB	BC	CD	DE	EA
Fore bearing	60°30'	122°00'	46°00'	205°30'	300°00'

- (10 Marks)
- c. The magnetic bearing of a line was found to be N 60°30' W in 2002, when the declination was 5°10'E. Find its present magnetic bearing, if declination is 3° W. (05 Marks)

OR

- 4 a. Explain briefly the applications of theodolite. (08 Marks)
 b. Explain the repetition method of measuring the horizontal angle using transit theodolite and errors eliminated by that method. (12 Marks)

Module-3

- 5 a. What is meant by balancing of traverse? Explain the Bowditch method of adjusting the traverse. (10 Marks)
 b. A tacheometer, fitted with an anallactic lens and having the multiplying constant 100, was set up at station C to determine the gradient between two points A and B and the following observations were taken keeping the staff vertical.

Staff @	Vertical angle	Stadia readings
A	+4°20'0"	1.300, 1.610, 1.920
B	0°10'40"	1.100, 1.410, 1.720

- If the horizontal angle ACB is 35°20' determine the gradient between A and B. (10 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. Derive the distance and elevation formulae for stadia techeometry, when the staff is held vertical and the line of sight being inclined upwards and downwards. (08 Marks)
- b. Describe the closing error in a compass traverse. Explain how the closing error is adjusted by transit rule. (06 Marks)
- c. The bearings of PQ and QR are $18^{\circ}36'$ and $60^{\circ}24'$ respectively. The coordinated of the ends P and R are:

Point	North coordinate	East Coordinate
P	300.0	400.0
R	1432.8	1257.2

Find the length of PQ and QR.

(06 Marks)

Module-4

- 7 a. Explain the effects of curvature and refraction in leveling. (08 Marks)
- b. The following observations were made on a hill top to ascertain its elevation. The height of the target F was 5m.

Instrument Station	Staff reading on BM	Vertical Angle	Remarks
O ₁	2.550	$18^{\circ}6'$	RL of
O ₂	1.670	$28^{\circ}42'$	BM = 345.58

The instrument station were 100 M apart and wave in line with 'F'.

(12 Marks)

OR

- 8 a. The following consecutive readings were taken with a dumpy level and 4m leveling staff on a continuously sloping ground at a common interval of 30m: 0.415, 1.025, 2.085, 2.925, 3.620, 0.715, 2.115, 3.090, 0.405, 1.525, 2.005, 3.650. The first point was 185.575 M above MSL. Rule out a page of level book and enter the readings. Calculate the reduced levels of all the points by "Height of instrument method". Also calculate the gradient of line joining first and last points. (10 Marks)
- b. Derive the expressions for the horizontal distance, vertical distance and the elevation of an elevated object, when the base is inaccessible and instrument stations are not in the same vertical plane with the object. (10 Marks)

Module-5

- 9 a. The following perpendicular offsets were taken from a chain line to an irregular boundary

Chainage	0	10	20	30	40	50	60	70
Off set	14.2	28.5	35.8	30.6	29.0	27.6	33.5	26.0

Compute the area of by: i) Mid ordinate rule (ii) Trapezoidal rule (iii) Simpson's rule

(12 Marks)

- b. Write short notes on digital planimeter. (08 Marks)

OR

- 10 a. Describe the different characteristics of contours. (08 Marks)
- b. Explain the interpolation of contours. List the methods of contouring. (04 Marks)
- c. A road embankment is 30 m wide at the top with side slopes of 2:1. The ground levels at 100 m intervals along a line AB are as under: A 170.30, 169.10, 168.50, 168.10, 166.50 B. The formation level at 'A' is 178.70M with uniform falling ground of 1 in 50 from 'A' to 'B'. Determine the volume of earthwork by prismoidal formula. Assume the ground to be in cross-section. (08 Marks)

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17CV/CT35

Third Semester B.E. Degree Examination, Dec.2018/Jan.2019 Engineering Geology

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Describe the role of geology in the Civil Engineering Projects. (06 Marks)
- b. With neat sketch, explain the different zones of the interior of the EARTH. (06 Marks)
- c. Define a mineral with examples. Describe the following physical properties of minerals :
i) Lustre ii) Cleavage. (08 Marks)

OR

- 2 Describe how the physical properties are helpful in their identification of minerals in the field with examples. (20 Marks)

Module-2

- 3 a. What are Rocks? Based on their origin, how the rocks have been classified and how are they formed with examples. (04 Marks)
- b. With the help of neat sketches, describe the forms of igneous rocks. (08 Marks)
- c. Describe any two rocks their geological properties and add their engineering uses :
i) Granite ii) Sand stone iii) Marble. (08 Marks)

OR

- 4 What are folds? How are they caused? With neat sketch, mention the parts of the fold. Describe the different types of folds with figures. Also add a note on their civil engineering considerations. (20 Marks)

Module-3

- 5 a. What is Weathering? Describe the mechanical and chemical weathering. (10 Marks)
- b. Give detailed account of geological work done by rivers. (10 Marks)

OR

- 6 a. What is an Earthquake? Describe the tectonic causes of earthquake and write note on the effects of earthquakes. (10 Marks)
- b. Write note on causes of landslides. (05 Marks)
- c. Write brief note on coastal land forms. (05 Marks)

Module-4

- 7 a. Define Ground water. Describe the hydrological cycle. Explain the factors influencing the surface runoff and infiltration. (10 Marks)
- b. Discuss the ground water survey by Electrical Resistivity method, with a circuit diagram. (10 Marks)

OR

- 8 Write notes on :
- Water table and perched water table.
 - Aquifer and its types.
 - Specific yield and retention.
 - Porosity and Permeability.
- (20 Marks)

Module-5

- 9
- What is Remote Sensing? Write its application in Civil Engineering. (08 Marks)
 - What is Geographical Information System? Name the different components of Geographical Information System. (06 Marks)
 - Write a note on Application of Global Positioning System (GPS) in Civil Engineering. (06 Marks)

OR

- 10 Write a note on :
- Impact of Mining , Quarring on Environment. (10 Marks)
 - Natural disasters and their mitigation. (10 Marks)

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17CV36

Third Semester B.E. Degree Examination, Dec.2018/Jan.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. Explain physical and chemical classification of rocks. (08 Marks)
b. List and explain Laboratory tests on bricks. (06 Marks)
c. Explain bulking of sand. (06 Marks)

OR

- 2 a. Which are the constituents of good brick earth? Explain. (06 Marks)
b. What is Quarrying of stone? Explain methods of Quarrying. (08 Marks)
c. Explain the importance of shape, size and texture of coarse aggregates in cement concrete making. (06 Marks)

Module-2

- 3 a. What is foundation? Explain the functions of foundation. (06 Marks)
b. Explain strip footing and strap footing with sketches. (06 Marks)
c. What are the special features of English bond? Explain with 1½ brick thick wall. (08 Marks)

OR

- 4 a. What is pile foundation? Explain with sketches the classification of pile foundation based on its function. (06 Marks)
b. Differentiate between Random rubble masonry and coursed rubble masonry. (06 Marks)
c. Draw the plan of 1½ brick thick Flemish bond and explain its salient features. (08 Marks)

Module-3

- 5 a. Explain the following with sketches:
(i) RCC lintel (ii) Stone lintel. (06 Marks)
b. Discuss various modes of failure of an arch and what are its remedies? (06 Marks)
c. Draw the sketch of king post wooden roof truss (half part) and label its parts. (08 Marks)

OR

- 6 a. Mention the types of sloped roof. Explain any three types of sloped roof with sketches. (08 Marks)
b. What are the requirements of good floor? What are the components of ground floor with mosaic flooring? (06 Marks)
c. What is an arch? Draw the sketch of elemental arch. (06 Marks)

Module-4

- 7 a. Explain salient features of framed and panelled door with sketch (Double shutter). (08 Marks)
b. Differentiate between Bay window and corner window with sketches. (06 Marks)
c. What are the requirements of good stair? (06 Marks)

OR

- 8 a. Design a stair-case for a residential building using stair hall $2.5\text{m} \times 5\text{m}$. The vertical distance between the floors is 3.6m. Sketch the plan of staircase. (08 Marks)
- b. What is shoring? Explain Raking shore with a sketch. (06 Marks)
- c. What are the requirements of locating door and windows? (06 Marks)

Module-5

- 9 a. Discuss the defects in plastering. (08 Marks)
- b. Name and explain the constituents of oil paint. (06 Marks)
- c. What are causes of dampening in the building and what are its remedies? (06 Marks)

OR

- 10 a. Explain the objects of plastering and types of plaster finishing. (08 Marks)
- b. Explain the procedure of painting for the following : (06 Marks)
- (i) New wood work surface
- (ii) New plastered surface
- c. Differentiate between stucco plastering and lathe plastering. (06 Marks)

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CBCS SCHEME

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17MATDIP31

Third Semester B.E. Degree Examination, Dec.2018/Jan.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. Prove that $(1 + \cos\theta + i \sin\theta)^n + (1 + \cos\theta - i \sin\theta)^n = 2^{n+1} \cos^n\left(\frac{\theta}{2}\right) \cos\left(\frac{n\theta}{2}\right)$ (08 Marks)
- b. Express $\sqrt{3} + i$ in the polar form and hence find its modulus and amplitude. (06 Marks)
- c. Find the sine of the angle between vectors $\vec{a} = \hat{i} + \hat{j} + \hat{k}$ and $\vec{b} = 2\hat{i} - 3\hat{j} + 2\hat{k}$ (06 Marks)

OR

- 2 a. Express $\frac{3+4i}{3-4i}$ in the form $x + iy$. (08 Marks)
- b. If the vector $2\hat{i} + \lambda\hat{j} + \hat{k} = 0$ and $4\hat{i} - 2\hat{j} - 2\hat{k}$ are perpendicular to each other, find λ . (06 Marks)
- c. Find λ , such that the vectors $2\hat{i} - \hat{j} + \hat{k}$, $\hat{i} + 2\hat{j} - 3\hat{k}$, $3\hat{i} + \lambda\hat{j} + 5\hat{k}$ are coplanar. (06 Marks)

Module-2

- 3 a. If $y = e^{a \sin^{-1} x}$, prove that $(1 - x^2)y_{n+2} - (2n + 1)xy_{n+1} - (n^2 + a^2)y_n = 0$ (08 Marks)
- b. With usual notations, prove that $\tan\phi = r \frac{d\theta}{dr}$. (06 Marks)
- c. If $u = \log_e \frac{x^3 + y^3}{x^2 + y^2}$, prove that $x \frac{\partial u}{\partial x} + y \frac{\partial u}{\partial y} = 1$. (06 Marks)

OR

- 4 a. Using Maclaurin's series, expand $\tan x$ upto the term containing x^5 . (08 Marks)
- b. Find the pedal equation of $r = a(1 - \cos\theta)$. (06 Marks)
- c. If $u = x + 3y^2 - z^3$, $v = 4x^2yz$ and $w = 2z^2 - xy$, find $\frac{\partial(u, v, w)}{\partial(x, y, z)}$ at $(1, -1, 0)$. (06 Marks)

Module-3

- 5 a. Obtain a reduction formula for $\int_0^{\pi/2} \cos^n x \, dx$, ($n > 0$). (08 Marks)
- b. Evaluate $\int_0^a \frac{x^7}{\sqrt{a^2 - x^2}} \, dx$ (06 Marks)
- c. Evaluate $\int_1^2 \int_1^3 xy^2 \, dx \, dy$ (06 Marks)

OR

- 6 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 $\int_{-1}^1 \int_0^z \int_{x-z}^{x+z} (x + y + z) \, dx \, dy \, dz$ (06 Marks)

Module-4

- 7 a. A particle moves along the curve $x = 2t^2$, $y = t^2 - 4t$ and $z = 3t - 5$, where 't' is the time. Find its velocity and acceleration vectors and also magnitude of velocity and acceleration at $t = 1$. (08 Marks)
- b. In which direction of the directional derivative of x^2yz^3 is maximum at $(2, 1, -1)$ and find the magnitude of this maximum. (06 Marks)
- c. Show that $\vec{F} = (y + z)\hat{i} + (x + z)\hat{j} + (x + y)\hat{k}$ is irrotational. (06 Marks)

OR

- 8 a. If $\phi = xy^2z^3 - x^3y^2z$, find $\nabla\phi$ and $|\nabla\phi|$ at $(1, -1, 1)$. (08 Marks)
- b. If $\vec{F} = (x + y + 1)\hat{i} + \hat{j} - (x + y)\hat{k}$, show that $\vec{F} \cdot \text{Curl } \vec{F} = 0$. (06 Marks)
- c. If $x = t^2 + 1$, $y = 4t - 3$, $z = 2t^2 - 6t$ represents the parametric equation of a curve, find the angle between the tangents at $t = 1$ and $t = 2$. (06 Marks)

Module-5

- 9 a. Solve : $\left(x \tan \frac{y}{x} - \frac{y}{x} \sec^2 \frac{y}{x} \right) dx = x \sec^2 \frac{y}{x} dy$ (08 Marks)
- b. Solve : $xy(1 + xy^2) \frac{dy}{dx} = 1$ (06 Marks)
- c. Solve : $\frac{dy}{dx} + \frac{y \cos x + \sin y + y}{\sin x + x \cos y + x} = 0$ (06 Marks)

OR

- 10 a. Solve : $(3y + 2x + 4)dx - (4x + 6y + 5)dy = 0$ (08 Marks)
- b. Solve : $(1 + y^2)dx = (\tan^{-1}y - x)dy$ (06 Marks)
- c. Solve : $(y \log y)dx + (x - \log y)dy = 0$. (06 Marks)

5. 'ನಾನು ನಿನ್ನೆ ಕೆ.ಜಿ.ಎಫ್‌ಗೆ ಹೋಗಿದ್ದೆನು' ಈ ವಾಕ್ಯದಲ್ಲಿರುವ ಕಾಲ :
 ಅ) ಭೂತ ಕಾಲ ಬ) ರಾಜಯೋಗ ಕಾಲ
 ಕ) ಯಮಗಂಡ ಕಾಲ ಡ) ರಾಹು ಕಾಲ
6. 'ಫೋಟೋಗ್ರಾಫಿ' ಪದಕ್ಕೆ ಸಮನಾದ ಕನ್ನಡದ ಪದ:
 ಅ) ವರ್ಣ ಚಿತ್ರ ಬ) ಛಾಯಾ ಚಿತ್ರ
 ಕ) ತೈಲ ಚಿತ್ರ ಡ) ಚಲನ ಚಿತ್ರ
7. 'ಬೆಣ್ಣೆ ಹಚ್ಚು' ಪದದ ಸರಿಯಾದ ಅರ್ಥ:
 ಅ) ರೊಟ್ಟಿಗೆ ಬೆಣ್ಣೆ ಹಚ್ಚು ಬ) ದೋಸೆಗೆ ಬೆಣ್ಣೆ ಹಚ್ಚು
 ಕ) ಹೊಗಳುವುದು ಡ) ರಾಗಿಮುದ್ದೆಗೆ ಬೆಣ್ಣೆ
8. 'ಎಲ್ಲ ಹುಡುಗಿಯರ ಕನಸು' ಕವನ ಯಾವುದರ ಕುರಿತಾಗಿದೆ?
 ಅ) ಸಂಪ್ರದಾಯಗಳಿಗಿಂತಲು ಮಿಗಿಲಾಗಿರುವುದು ಮಹಿಳೆಯ ಘನತೆ.
 ಬ) ಮಹಿಳಾ ಮೀಸಲಾತಿ
 ಕ) ಸಮಾನತೆಗಾಗಿ ಚಳುವಳಿ
 ಡ) ಕನಸಿನ ಮದುವೆ
9. ಶ್ರೀ 'ಬಂದೇ ನವಾಜ್' ಯಾರು?
 ಅ) ಗುಲಬರ್ಗಾದ ಸೂಫಿ ಸಂತರು ಬ) ಬ್ರಿಟಿಶರಿಂದ ಉಂಬಳಿ ಪಡೆದವರು
 ಕ) ವಜ್ರ ವ್ಯಾಪಾರಿಗಳು ಡ) ಗಣಿ ಧಣಿ
10. 'ರೆಹಮಾನರ ಹಾಡಿನ ಕಂಪೋಷನ ಚೆನ್ನಾಗಿದೆ' ಎನ್ನುವ ವಾಕ್ಯದಲ್ಲಿ ಕಂಪೋಷನ ಪದಕ್ಕೆ ಸರಿಯಾದ ಕನ್ನಡದ ಪದ:
 ಅ) ಧ್ವನಿ ಸಂಪತ್ತು ಬ) ಸಂಯೋಜನೆ
 ಕ) ನಿರ್ದೇಶನ ಡ) ಕಂಠದಾನ
11. 'ಆನೆಹಳ್ಳದಲ್ಲಿ ಹುಡುಗಿಯರು' ಲೇಖನದಲ್ಲಿ ವಿದ್ಯಾರ್ಥಿಗಳ ಪ್ರವಾಸದ ಉದ್ದೇಶ :
 ಅ) ಆನೆ ದಂತ ಸಂಗ್ರಹಣೆ ಬ) ಖೆಡ್ಡಾಗಳ ಕುರಿತು ಅಧ್ಯಯನ
 ಕ) ಸಸ್ಯ ವೀಕ್ಷಣೆ ಡ) ಹುಲಿ ವೀಕ್ಷಣೆ
12. ಡಾ|| ಬೆಸಗರಹಳ್ಳಿ ರಾಮಣ್ಣನವರ 'ಗಾಂಧಿ' ಕಥೆ ಏನನ್ನು ಪ್ರತಿಪಾದಿಸುತ್ತದೆ?
 ಅ) ವರ್ಣಾಶ್ರಮ ಪದ್ಧತಿ
 ಬ) ಜಾತೀಯತೆ
 ಕ) ಮುಢ ನಂಬಿಕೆ
 ಡ) ಮಹಾತ್ಮ ಗಾಂಧೀಜಿಯವರ ಮೌಲ್ಯಗಳಿಗೆ ಒದಗಿರುವ ಅವಸ್ಥೆಯನ್ನು
13. ಶ್ರೀ ಸಿದ್ಧಲಿಂಗಯ್ಯನವರ 'ಬೆಲ್ವಿಯ ಹಾಡು' ಕವನದಲ್ಲಿ ಕಂಡುಬರುವ ಅಂಶ :
 ಅ) ಸಮಾಜದ ಸುಸ್ಥಿತಿ ಬ) ಪ್ರೇಮದ ರಮ್ಯತೆ
 ಕ) ಭಕ್ತಿಯ ಪರವಶತೆ ಡ) ದಲಿತರ ಕನಸು

14. 'ಒಲೆಹತ್ತಿ ಉರಿದಡೆ ನಿಲಬಹುದಲ್ಲದೇ, ಧರೆಹತ್ತಿ ಉರಿದರೆ ನಿಲಬಾರದು, ಏರಿ ನೀರುಂಬಡೆ ಬೇಲಿ ಹೊಲದ ಮೇವೊಡೆ, ನಾರಿ ತನ್ನ ಮನೆಯಲ್ಲಿ ಕಳುವೊಡೆ, ತಾಯಿಯ ಮೊಲೆಹಾಲು ನಂಜಾಗಿ ಕೊಲವುಡೆ ಇನ್ನಾರಿಗೆ ದೂರುವೆ ಕೂಡಲ ಸಂಗಮದೇವಾ' ಈ ವಚನದ ರಚನೆಕಾರರು:
- ಅ) ಸರ್ವಜ್ಞ
ಬ) ಚಾಮರಸ
ಕ) ಅಲ್ಲಮಪ್ರಭು
ಡ) ಬಸವಣ್ಣ
15. ಮಲೆಮಾದೇಶ್ವರ ಬೆಟ್ಟವಿರುವ ಸ್ಥಳ:
- ಅ) ಅರಿಶಿನಕುಂಟೆ
ಬ) ಅಧಣಿ
ಕ) ಅಫಜಲಪುರ
ಡ) ಕೊಳ್ಳೆಗಾಲ
16. 'ಶ್ರೀ ಸಂಗೊಳ್ಳಿ ರಾಯಣ್ಣ' ಯಾರು?
- ಅ) ಅದ್ಭುತ ಭಾಷಣಕಾರ
ಬ) ವಂದಿಮಾಗಧರಿಗೆ ಸೇರಿದವನು
ಕ) ಬ್ಯಾಂಕಗಳಿಗೆ ಮೋಸ ಮಾಡಿದವನು
ಡ) ಬ್ರಿಟಿಷರ ವಿರುದ್ಧ ಹೋರಾಡಿದ ಹೋರಾಟಗಾರ
17. ಮೊದಲು ಕನ್ನಡಕ್ಕೊಂದು ಅಪರೂಪ ನಿಘಂಟನ್ನು ರಚಿಸಿಕೊಟ್ಟವರು:
- ಅ) ಪಂಪ
ಬ) ಹರಿಹರ
ಕ) ಮೆಕಾಲೆ
ಡ) ಕಿಟ್ಟೆಲ್
18. 'ಕನ್ನಡ ಸಂಸ್ಕೃತಿ' ಈ ರೀತಿಯಾಗಿದೆ :
- ಅ) ಬಹುರೂಪಿಯಾಗಿದೆ
ಬ) ವರ್ಣರಂಜಿತವಾಗಿದೆ
ಕ) ಜೀವಂತವಾಗಿದೆ
ಡ) ಮೇಲಿನ ಎಲ್ಲವು
19. 'ಅಂಬಿಕಾತನಯದತ್ತ' ಕಾವ್ಯನಾಮದ ಕವಿ :
- ಅ) ದ.ರಾ. ಬೇಂದ್ರೆ
ಬ) ಕೆ.ವಿ.ಪುಟ್ಟಪ್ಪ
ಕ) ವಿ.ಕೃ.ಗೋಕಾಕ
ಡ) ಗೋಪಾಲಕೃಷ್ಣ ಅಡಿಗ
20. ಕನ್ನಡಕ್ಕೆ ಸಂದಿರುವ ಜ್ಞಾನಪೀಠ ಪ್ರಶಸ್ತಿಗಳು :
- ಅ) ೧೦
ಬ) ೮
ಕ) ೭
ಡ) ೯
21. 'ಶ್ರಾವಣ' ಕವನದಲ್ಲಿ ಕವಿ ಯಾವುದರ ಸೌಂದರ್ಯವನ್ನು ವರ್ಣಿಸಿದ್ದಾರೆ?
- ಅ) ಧಾರವಾಡದ
ಬ) ಬೆಂಗಳೂರಿನ
ಕ) ನಿಸರ್ಗದ
ಡ) ಬೆಳಗಾವಿಯ
22. ಶ್ರೀ ವಿಶ್ವೇಶ್ವರಯ್ಯನವರು ಮೊದಲಬಾರಿ ಜೋಗ ಜಲಪಾತದ ಎದುರು ನಿಂತಾಗ ಹೇಳಿದ್ದು:
- ಅ) ಎಷ್ಟೊಂದು ಬೆಳೆ ಪೋಲಾಗುತ್ತಿದೆ
ಬ) ಎಷ್ಟೊಂದು ಸಮಯ ಪೋಲಾಗುತ್ತಿದೆ
ಕ) ಎಷ್ಟೊಂದು ಹಣ ಪೋಲಾಗುತ್ತಿದೆ
ಡ) ಎಷ್ಟೊಂದು ಶಕ್ತಿ ಪೋಲಾಗುತ್ತಿದೆ

23. ಶ್ರೀ ಕುವೆಂಪುರವರ ಲೇಖನ ಯಾವ ಭಾಗದ ಚಿತ್ರಣವನ್ನು ನೀಡುತ್ತದೆ?
 ಅ) ಮಲೆನಾಡು ಬ) ಕರಾವಳಿ
 ಕ) ಮರುಭೂಮಿ ಡ) ದೊಡ್ಡನಗರ ಪ್ರದೇಶ
24. ಶ್ರೀ ವಿಶ್ವೇಶ್ವರಯ್ಯನವರ ಬಾಷಣಕ್ಕೆ ಯಾವುದು ಸರಿಹೊಂದುವುದಿಲ್ಲ?
 ಅ) ಆಲೋಚನೆಯಲ್ಲಿ ಸತ್ಯನಿಷ್ಠೆ.
 ಬ) ಹಾವಭಾವ-ಮಾತಿನ ಮಂಟಪದಲ್ಲಿ ಜನರನ್ನು ಮರಳುಮಾಡುವುದು.
 ಕ) ಭಾಷಣದ ಕುರಿತು ತಯಾರಿ
 ಡ) ಶೋತೃವರ್ಗಕ್ಕೆ ಗೌರವ
25. ಶ್ರೀ ಶಿವರಾಮ ಕಾರಂತರ "ದೋಣಿ ಹರಿಗೋಲುಗಳಲ್ಲಿ" ಲೇಖನ ಯಾವ ರೀತಿ ಯಾಗಿದೆ?
 ಅ) ವಿಡಂಬನೆ ಬ) ನಾಟಕ
 ಕ) ಪ್ರವಾಸ ಕಥನ ಡ) ತಂತ್ರಜ್ಞಾನ ಲೇಖನ
26. ಶ್ರೀ ವಿಶ್ವೇಶ್ವರಯ್ಯನವರ ವ್ಯಕ್ತಿತ್ವಕ್ಕೆ ಹೊಂದಿಕೊಳ್ಳುವಂತದ್ದು :
 ಅ) ಶಿಸ್ತು ಬ) ಪಾಶ್ಚಾತ್ಯ ದಿರಿಸು
 ಕ) ಹೊಣೆಗಾರಿಕೆ ಡ) ಮೇಲಿನ ಎಲ್ಲವು
27. 'ಸುಖ' ಪದಕ್ಕೆ ವಿರುದ್ಧಾರ್ಥಕ ಪದ :
 ಅ) ದುಃಖ ಬ) ನಲಿವು
 ಕ) ಸಂತೋಷ ಡ) ಒಲವು
28. 'ನಮ್ಮ ಎಮ್ಮೆಗೆ ಮಾತು ತಿಳಿಯುವುದೇ?' ಲೇಖನ ಯಾವ ರೀತಿಯಲ್ಲಿದೆ?
 ಅ) ತಂತ್ರಜ್ಞಾನ ಲೇಖನ ಬ) ವಿನೋದ ಲೇಖನ
 ಕ) ಪತ್ರಿಕಾ ಅಂಕಣ ಡ) ನಾಟಕ
29. ಶ್ರೀ ಪಿ.ಲಂಕೇಶ 'ಗುಬ್ಬಿಚ್ಚಿಗೂಡು' ಲೇಖನದಲ್ಲಿ ಚಿಂತಿಸಿರುವುದು :
 ಅ) ಭಟ್ಟಂಗಿಗಳ ಬದುಕು ಬ) ದೀನತೆಯ ಬದುಕು
 ಕ) ಸ್ವಂತಿಕೆಯ ಬದುಕು ಡ) ಅಸಮಾನತೆಯ ಬದುಕು
30. 'ಜನ' ಯಾವ ಲಿಂಗ
 ಅ) ಸ್ತ್ರೀ ಲಿಂಗ ಬ) ಪುಲ್ಲಿಂಗ
 ಕ) ಅಲಿಂಗ ಡ) ನಪುಂಸಕಲಿಂಗ

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CBCS SCHEME

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17/KKK39

Question Paper Version : C

Third Semester B.E. Degree Examination, Dec.2018/Jan.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 are strictly prohibited.**

Note : Substitute the words from the following each sentence in appropriate place [From Q No. 1 to 3]

1. naanu uu maaDu
a) maaDuttene
c) maaDisu
b) maaDideya
d) maaDi
2. Namma manege baa ?
a) Baruttiya
c) BeDa
b) Bandi
d) Baru
3. Nanna hattira Kutka.
a) KuLituko
c) Kundru
b) KooDu
d) None.

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

4. nanage ninna sahavaasa khanDitaa -----.
a) BeDa
c) Ide
b) Beka
d) Illa.

Note : Translate the following Kannada question into English. [from question No. 5 to 6]

5. Niivu yaaru ?
a) who is this?
c) who are you?
b) what is this?
d) what is there?

6. Idu Enu?
 a) who is this? b) what is this?
 c) who are you? d) what is there?

Note : Translate the Kannada word into English.
[From Q No. 7 to 16]

7. Meenu
 a) Animal b) Fish
 c) Crow d) Owl
8. Nayee
 a) Pig b) Cow
 c) Dog d) Cat
9. Aat
 a) See b) Come
 c) Go d) Play
10. Mana
 a) Home b) School
 c) Pen d) Mind
11. Naru
 a) I b) You
 c) We d) He
12. Maga
 a) Father b) Sister
 c) Daughter d) Son
13. Baa
 a) Go b) Sit
 c) Visit d) Come
14. Kaagad
 a) Chair b) Computer
 c) Mouce d) Paper
15. Avanu
 a) He b) She
 c) It d) They
16. Aangla
 a) Kannada b) English
 c) Marathi d) Urdu.

Note : Fill in the blank by translating the given English word to Kannada.
[From Question No: 17 to 21]

17. He : -----
 a) NAnu b) Neenu
 c) Avanu d) AvaLu
18. When : -----
 a) Yaaru b) Yaavaga
 c) Yelli d) Yaake

19. Teacher : -----
 a) HuDuga
 c) Shikshaka/ki
 b) Manushya
 d) Shishya
20. Vegetable : -----
 a) tarakari
 c) tavaruru
 b) takararu
 d) tamota
21. Garden : -----
 a) Mane
 c) TooTa
 b) Shaale
 d) Baagilu

Note : Write the English word for given Kannada word [From Q No. 22 to 25]

22. HaLe
 a) New
 c) Not
 b) Now
 d) Old
23. Kurci
 a) Table
 c) Chair
 b) Book
 d) Pen
24. GaNita
 a) Physics
 c) Mathematics
 b) Biology
 d) English
25. Shaale
 a) Home
 c) Office
 b) School
 d) Room.

Note : Translate the following English words to Kannada [from Q No. 26 to 30]

26. Near
 a) Swalpa
 c) heege
 b) hattira
 d) hosa
27. Shop
 a) AngaDi
 c) kante
 b) dukan
 d) Mane.
28. See
 a) NooDu
 c) BiDu
 b) MaaDu
 d) IDu
29. Moon
 a) candra
 c) Naksatra
 b) Suurya
 d) Boomi
30. Child
 a) Maanava
 c) MahiLe
 b) Magu
 d) HeNNu

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Question Paper Version : D

Third Semester B.E. Degree Examination, Dec.2018/Jan.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 are strictly prohibited.

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

1. nanage ninna sahavaasa khanDitaa -----
a) BeDa
b) Beka
c) Ide
d) Illa.

Note : Translate the following Kannada question into English.
[from question No. 2 to 3]

2. Niiva yaaru ?
a) who is this?
b) what is this?
c) who are you?
d) what is there?
3. Idu Enu?
a) who is this?
b) what is this?
c) who are you?
d) what is there?

Note : Fill in the blank by translating the given English word to Kannada.
[From Question No : 4 to 8]

4. He : -----
a) NAnu
b) Neenu
c) Avanu
d) AvaLu
5. When : -----
a) Yaaru
b) Yaavaga
c) Yelli
d) Yaake