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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	$\pi/6$	$2\pi/6$	$3\pi/6$	$4\pi/6$	$5\pi/6$	$\pi$
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  $\theta$  - 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

- 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

- 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

(06 Marks)

- 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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# CBCS SCHEME

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17ME32

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

## Material Science

Time: 3 hrs.

Max. Marks: 100

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

### Module-1

- 1 a. Define APF and coordination number. Calculate the APF for HCP structure. (08 Marks)  
b. Differentiate Edge dislocation and screw dislocation. (05 Marks)  
c. State and explain Fick's I and II law diffusion. (07 Marks)

OR

- 2 a. List the mechanical properties in plastic range. Explain them briefly. (08 Marks)  
b. With neat sketch, explain S-N diagram and creep curve. (12 Marks)

### Module-2

- 3 a. Define solid solution. Explain the different types of solid solutions. (07 Marks)  
b. Explain the factors affecting the formation of solid solution. (05 Marks)  
c. Explain Lever rule and Gibbs phase rule with an example. (08 Marks)

OR

- 4 a. Draw Fe-Fe<sub>3</sub>C diagram and indicate the phase temperatures and also write the invariant reaction. (12 Marks)  
b. What is homogeneous nucleation? Obtain an expression for critical radius of Nuclei. (08 Marks)

### Module-3

- 5 a. Draw TTT diagram for 0.8% C and super-impose the cooling curves. Explain briefly. (10 Marks)  
b. With neat sketch, explain hardening and tempering heat treatment processes. (10 Marks)

OR

- 6 a. Explain the Age hardening of Al-Cu alloys. (05 Marks)  
b. With neat sketches explain Flame Hardening. (06 Marks)  
c. List the properties and applications of Gray cast Iron, Malleable Cast Iron and S.G. Iron. (09 Marks)

### Module-4

- 7 a. Define ceramics and what are its types? (06 Marks)  
b. Enumerate Electrical and Mechanical properties of ceramics. (08 Marks)  
c. Write the uses of plastics in the various field of engineering. (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

- 8 a. Differentiate the thermo plastics and thermo setting plastics. (05 Marks)  
 b. With a neat sketch explain the processing of plastics using injection moulding method. (10 Marks)  
 c. Write a note on properties and applications of smart materials. (05 Marks)

Module-5

- 9 a. Define composites. Give its classification. (05 Marks)  
 b. With a neat sketch, explain pultrusion process. (08 Marks)  
 c. What are the advantages and applications of composites? (07 Marks)

OR

- 10 a. Derive an equation for Young's modulus of FRP composites using:  
 i) Iso-strain condition  
 ii) Iso-stress condition (14 Marks)  
 b. Calculate the tensile modulus of elasticity of unidirectional carbon fibre reinforced composite material contains 62% by volume of carbon-fibres in  
 i) Iso-stress condition  
 ii) Iso-strain condition  
 Take:  $E_{\text{carbon fibre}} = 37.86 \times 10^4 \text{ N/mm}^2$   
 $E_{\text{epoxy}} = 42 \times 10^2 \text{ N/mm}^2$  (06 Marks)

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# CBCS SCHEME

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17ME33

## Third Semester B.E. Degree Examination, Dec.2018/Jan.2019 Basic Thermodynamics

Time: 3 hrs.

Max. Marks: 100

- Note:** 1. Answer any FIVE full questions, choosing ONE full question from each module.  
2. Use of Thermodynamic Data Handbook is permitted.

### Module-1

- 1 a. Define the following with examples :  
 i) Open system      ii) Closed system      iii) Isolated system  
 iv) Path function      v) Point function. (10 Marks)
- b. In 1709, Newton proposed a linear temperature scale where ice point and normal human body temperature are assumed as two fixed points of  $0^{\circ}\text{N}$  and  $12^{\circ}\text{N}$  respectively. The temperature of human body on the Celsius scale is  $36^{\circ}\text{C}$ . Obtain relation between Newton scale and Celsius scale. (10 Marks)

OR

- 2 a. Obtain the expression for displacement work  
 i) Isothermal process      ii) Polytropic process  
 iii) Isobaric process      iv) Isochoric process.  
 Draw the P-V diagram for each process. (10 Marks)
- b. Determine the total work done by a gas system following expansion process as shown below: Fig Q2(b).

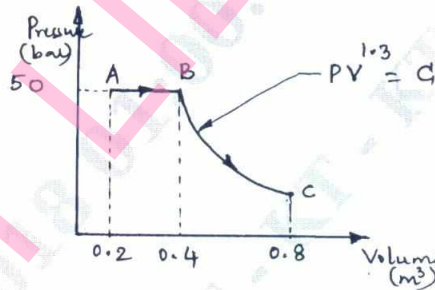


Fig Q2(b)

(10 Marks)

### Module-2

- 3 a. Apply steady flow energy equation to each of following :  
 i) Boiler      ii) Nozzle      iii) Centrifugal pump      iv) Throttling device      v) Turbine. (10 Marks)
- b. A Piston and cylinder machine contains a fluid system which passes through a complete cycle of four process. During a cycle, the sum of all heat transfers is  $-170\text{kJ}$ . The system completes 100 cycles per min. Complete the following table showing the method for each item and compute the net rate of work output in kW. (10 Marks)

Process	Q (kJ/ min)	W (kJ/min)	$\Delta E$ (kJ/min)
a – b	0	2170	?
b – c	21000	0	?
c – d	- 2100	?	- 36600
d – a	?	?	?



OR

- 4 a. Prove that Kelvin – Planck statement and Clausius statements of second law of thermodynamic are equivalent. (08 Marks)  
 b. State Carnot's theorem. (02 Marks)  
 c. A reversible heat engine operates between two reservoirs at temperature of 600°C and 40°C. The engine drives a reversible refrigerator which operates between reservoirs at temperature of 40° and -20°C. The heat transfer to the heat engine is 2000kJ and net work output of combined engine refrigerator plant is 360kJ. Evaluate the heat transfer to the refrigerant and net heat transfer to the reservoir at 40°C. (10 Marks)

Module-3

- 5 a. Explain how free expansion and friction makes the process irreversible. (08 Marks)  
 b. What is internal and external irreversibility? (04 Marks)  
 c. Show that entropy is a property of a system. (08 Marks)

OR

- 6 a. State and prove Clausius inequality. (10 Marks)  
 b. 0.5 Kg of air initially at 27°C is heated reversibly at constant pressure until the volume is doubled and is then heated reversibly at constant volume until the pressure is doubled. For the total path, find the work transfer, heat transfer and change of entropy. (10 Marks)

Module-4

- 7 a. Explain the concept of Available and Unavailable energy. (04 Marks)  
 b. Write a note on Maxwell relations. (06 Marks)  
 c. A vessel of volume 0.04m<sup>3</sup> contains a mixture of saturated water and saturated steam at a temperature of 250°C. The mass of liquid present is 9Kg. Find the pressure, mass, specific volume, enthalpy, entropy and internal energy. (10 Marks)

OR

- 8 a. With a neat sketch, explain the working of combined separating and throttling calorimeter. (10 Marks)  
 b. Steam at 0.8MPa, 250°C and flowing at the rate of 1Kg/s passes into a pipe carrying wet steam at 0.8MPa, 0.95 dry. After adiabatic mixing, the flow rate is 2.3 Kg/s. Determine the condition of steam after mixing, Neglect the velocity of steam in the pipeline. (10 Marks)

Module-5

- 9 a. State and explain i) Dalton's Law ii) Amagat's law. (08 Marks)  
 b. Define the following : i) Dry bulb temperature ii) Wet bulb temperature  
 iii) Specific humidity iv) Relative humidity (04 Marks)  
 c. A mixture of gases has the following volumetric composition  
 CO<sub>2</sub> = 12%  
 O<sub>2</sub> = 4%  
 N<sub>2</sub> = 82%  
 CO = 2%  
 Calculate : i) the gravimetric composition  
 ii) Molecular weight of mixture  
 iii) R of mixture (08 Marks)

OR

- 10 a. Derive Vander Waal's constant interms of critical properties. (08 Marks)  
 b. Explain the following : i) Compressibility factor  
 ii) Law of corresponding states. (04 Marks)  
 c. Determine the mass of Nitrogen contained in a 35m<sup>3</sup> vessel at 200 bar and 200 K by using  
 i) Ideal gas equation ii) Compressibility chart. (08 Marks)

# CBCS SCHEME

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17ME/MA34

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

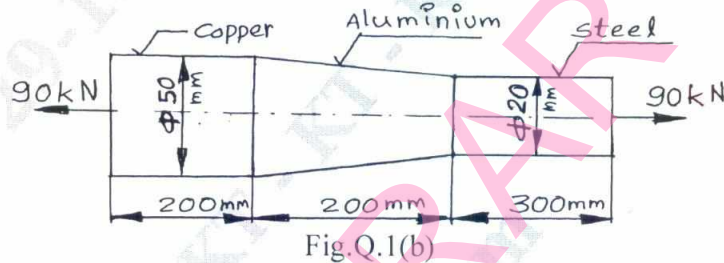
Time: 3 hrs.

Max. Marks: 100

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

### Module-1

- 1 a. Derive the expression for elongation in taper round bar of length ' $l$ ', tapering uniformly for diameter ' $d_1$ ' to ' $d_2$ ' and subjected to an axial load of ' $F$ ' modulus of elasticity is  $E$ . (10 Marks)
- b. Find the elongation in a bar loaded as shown in Fig.Q.1(b). Take modulus of elasticity for steel  $E_S = 200\text{GPa}$ , for copper  $E_C = 100\text{GPa}$  and for aluminium  $E_A = 70\text{GPa}$ . (10 Marks)

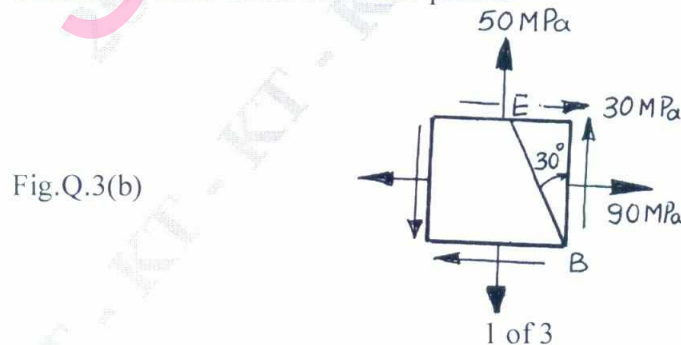


OR

- 2 a. Derive relation between Young's modulus " $E$ " and rigidity modulus " $G$ ". (10 Marks)
- b. A steel rail 12.6m long is laid at temperature of  $24^\circ\text{C}$ . The maximum temperature is  $44^\circ\text{C}$ . Estimate the minimum gap between the rails so that the temperature stresses do not develop. Also calculate the thermal stresses developed in rails if no gap is provided between rails. If an expansion of 2mm is allowed, what is the stress induced. Take  $E = 200\text{GPa}$ ,  $\alpha = 12 \times 10^{-6}/^\circ\text{C}$ . (10 Marks)

### Module-2

- 3 a. Derive an expression for normal and shear stresses on an oblique plane inclined at ' $\theta$ ' with vertical axis ( $x$ -plane) in a biaxial system subjected to stresses  $\sigma_x$  and  $\sigma_y$  on mutually perpendicular axes. (08 Marks)
- b. For an element loaded as shown in the Fig.Q.3(b), find:
  - i) Normal and shear stresses along inclined plane BE.
  - ii) Principal stresses and their angles
  - iii) Maximum shear stress and shear planes. (12 Marks)



Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
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OR

- 4 a. Derive expressions for circumferential and longitudinal stresses for a thin cylinder of diameter 'd', length 'l' and thickness 't' subjected to internal pressure 'p'. (10 Marks)
- b. A pipe of internal diameter 300mm and wall thickness of 100mm contains fluid under a pressure of 6MPa. Calculate and sketch the radial and hoop stresses induced across the wall. (10 Marks)

**Module-3**

- 5 Draw the shear force and bending moment diagrams for a beam loaded as shown in Fig.Q.5. Determine the location of point of contraflexure. Also find maximum bending moment and its location. (20 Marks)

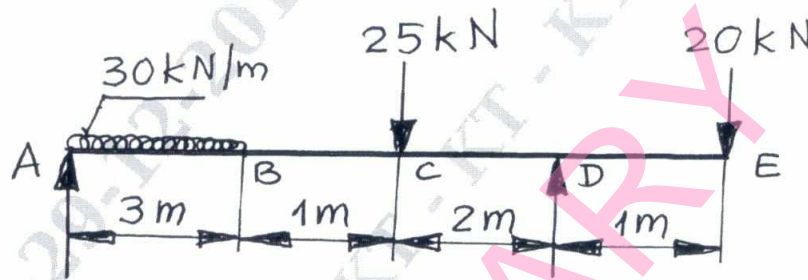


Fig.Q.5

OR

- 6 a. Derive the equation of bending  $\frac{M}{I} = \frac{\sigma}{Y} = \frac{E}{R}$ . (10 Marks)
- b. A simply supported beam of span 3m has T-cross section. The flange is 100mm × 20mm and the web is 200mm × 12mm, with the flange in compression. The maximum compressive stress is to be limited to 90MPa. Find the maximum intensity of UDL that can be carried and the corresponding tensile stress induced. (10 Marks)

**Module-4**

- 7 a. Derive the equation of torsion  $\frac{T}{J} = \frac{\tau}{r} = \frac{G\theta}{l}$ . (10 Marks)
- b. A shaft transmits 180kW at 240rpm. The allowable shear stress is 72MPa.
- Find the diameter of solid shaft.
  - Also find the diameters of hollow shaft if the inside diameter is 0.6 times its outside diameter.
  - What is the percentage of saving of material if both shafts are of same material and length? (10 Marks)

OR

- 8 a. Derive an expression for Euler's critical load for a column with both ends pinned. (10 Marks)
- b. Find the Euler's critical load for a column 1.2m long of rectangular cross section 90mm wide, 60mm depth with both ends hinged. Modulus of elasticity is 200GPa. Compare it with Rankine's critical load taking Rankine's constants  $\sigma = 300$  MPa and  $\alpha = \frac{1}{7500}$ . (10 Marks)

**Module-5**

- 9 a. Derive an expression for strain energy for a member subjected to axial load. (05 Marks)  
b. Explain Castigliano theorem – I. (05 Marks)  
c. A round rod 120mm diameter, 1.8m long transmits 300kW at 900rpm. Find the maximum strain energy stored by the rod. Take  $G = 80,000 \text{ N/mm}^2$ . (10 Marks)

**OR**

- 10 a. Define:  
i) Strain energy  
ii) Modulus of resilience  
iii) Toughness (06 Marks)
- b. Find the diameter of round rod subjected to a bending moment of 1.8 kN-m and a torque of 1.2 kN-m, according to  
i) Maximum normal stress theory  
ii) Maximum shear stress theory.  
Take allowable normal stress as 120MPa and allowable shear stress as 72 MPa. (14 Marks)

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# CBCS SCHEME

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17ME35A

## Third Semester B.E. Degree Examination, Dec.2018/Jan.2019 Metal Casting and Welding

Time: 3 hrs.

Max. Marks: 100

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

### Module-1

- 1 a. Define casting process. Explain steps involved in casting process. (10 Marks)
- b. What is pattern? Discuss the importance of providing various allowances to the pattern. (06 Marks)
- c. Define core. Give its classification. (04 Marks)

OR

- 2 a. With a neat sketch explain the working of Jolt moulding machine. (08 Marks)
- b. Explain investment moulding process with necessary sketches listing its advantages and disadvantages. (10 Marks)
- c. List the functions of a Riser. (02 Marks)

### Module-2

- 3 a. Explain Hot chamber pressure die casting process with a neat sketch. (08 Marks)
- b. Explain continuous casting process with a neat sketch. (08 Marks)
- c. Classify melting furnaces. (04 Marks)

OR

- 4 a. With a neat sketch describe the construction and working of cupola furnace. (10 Marks)
- b. Describe the construction and working of Direct Arc Electric furnace with neat sketches. (10 Marks)

### Module-3

- 5 a. Define solidification. List solidification variables. (04 Marks)
- b. List and explain the methods of achieving directional solidification. (08 Marks)
- c. Why the degasification in liquid metals is necessary? Discuss briefly the methods of removing entrapped gases in liquid metals. (08 Marks)

OR

- 6 a. Name the casting defects. Explain their causes and remedies. (08 Marks)
- b. With a neat sketch explain the stir casting process. (08 Marks)
- c. Mention the advantages and limitations of casting process. (04 Marks)

### Module-4

- 7 a. Define welding. Classify the welding processes. (04 Marks)
- b. Explain Metal-Inert-Gas (MIG) welding process with a neat diagram. (08 Marks)
- c. Explain spot welding process mentioning its applications. (08 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
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**OR**

- 8 a. Explain the thermit welding process with sketch listing its advantages and applications. (10 Marks)
- b. With a neat diagram, explain electron beam welding process. Mention its advantages, disadvantages and applications. (10 Marks)

**Module-5**

- 9 a. Brief about formation of different zones in welding process. (05 Marks)
- b. Define Brazing. Brief about Torch brazing process. (07 Marks)
- c. Explain Oxy-acetylene welding process with a neat sketch. (08 Marks)

**OR**

- 10 a. With a neat sketch explain magnetic particle inspection method and list its advantages. (10 Marks)
- b. Explain Radiography inspection method with its advantages and disadvantages. (10 Marks)

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Question Paper Version : B

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

**Constitution of India, Professional Ethics  
and Human Rights (CPH)**

(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.

- 
1. The Election Commission of India does not conduct election to
    - a) The Parliament
    - b) The office of the President
    - c) The post of Prime Minister
    - d) The office of the Vice President
  2. What is the tenure of the Chief Election Commissioner and other election commissioners?
    - a) 3 years or upto 62 years of age
    - b) 5 years or upto 65 years of age
    - c) 6 years or upto 65 years of age
    - d) 5 years or upto 70 years of age
  3. The procedure for amending the Indian Constitution is detailed under
    - a) Art. 356
    - b) Art. 360
    - c) Art. 366
    - d) Art. 368
  4. Art. 21A – Right to Education as a Fundamental Right was added to the Indian constitution by
    - a) 61<sup>st</sup> Constitution Amendment
    - b) 74<sup>th</sup> Constitution Amendment
    - c) 86<sup>th</sup> Constitution Amendment
    - d) 91<sup>st</sup> Constitution Amendment
  5. When the State Emergency is in operation, the President cannot interfere in the matters of
    - a) State Judiciary
    - b) State Executive
    - c) State Legislature
    - d) All of these.

6. While Proclamation of National Emergency is in operation, the President cannot suspend certain Fundamental Rights. These are
- Art. 14 and Art. 15
  - Art. 14 and Art. 16
  - Art. 20 and Art. 21
  - Art. 32
7. B. P. Mandal commission appointed in 1978 by the President of India dealt with
- Rights of the minority
  - Laws relating to child labour
  - Laws relating to sexual harassment at work places
  - Reservation for other backward classes (OBC) people in Government Jobs.
8. Who are considered to be vulnerable group?
- Women and children
  - Scheduled Caste people
  - Scheduled Tribe people
  - All of these
9. Who can be appointed as the Chairman of the National Human Rights Commission?
- Any sitting judge of the Supreme Court
  - Any retired Chief Justice of the Supreme Court
  - Any person appointed by the President
  - Retired Chief Justice of any High Court
10. National Human Rights commission is a \_\_\_\_\_
- Statutory body
  - Constitutional body
  - Multilateral Institution
  - Both (a) and (c)
11. Powers, authority and responsibilities of Municipalities have been provided under
- Article 243 N
  - Article 243 W
  - Article 243 M
  - None of these
12. Which among the following is considered as the training ground for the development of democratic institutions?
- Nagar Panchayats
  - Municipalities
  - Municipal Corporations
  - Gram Panchayats
13. Good works mean
- Superior work done with great care and skill
  - Responsible work
  - Work above and beyond the call of duty
  - Work involving high risk.
14. Engineering profession is considered to be like a building, its foundation is
- Hard and sincere work
  - Expert engineering knowledge and skill
  - Sound common sense and expert knowledge
  - Honesty
15. In engineering research work, cooking means
- Boiling under pressure
  - Retaining only those results which fit the theory
  - Making deceptive statements
  - Misleading the public about the quality of the product



16. Engineering Ethics is a  
a) Preventive ethics  
b) Natural ethics  
c) Technical ethics  
d) Scientifically developed ethics
17. The author of a book retains the copy right for \_\_\_\_\_ after his or her death.  
a) 20 years  
b) 30 years  
c) 60 years  
d) 10 years
18. The public is put to increased risk by allowing increased number of deviations from specified standards of safety and acceptable risk is known as  
a) Normal accident  
b) Normalizing deviance  
c) Risk assessment  
d) Overestimated risk.
19. The constitution of India derives its authority from the  
a) Parliament of India  
b) Supreme Court of India  
c) People of India  
d) Constituent Assembly of India
20. It is not the objective enshrined in the preamble  
a) Equality of status  
b) Secure shelter and proper livelihood to all  
c) Liberty of thought and expression  
d) Social, economic and political justice
21. Right of decent environment includes  
a) Freedom to reside in any part of India.  
b) Right to religion  
c) Right to equal protection of law.  
d) Right to life.
22. The Emergency provisions incorporated in the Constitution of India were influenced by the Constitution of  
a) German Reich  
b) U.S.A  
c) Russia  
d) Canada
23. The Directive Principles of State Policy directs the State to secure to all workers  
a) Minimum wages  
b) Fair wages  
c) Living wages  
d) Standard wages
24. This is not a fundamental duty.  
a) To defend the country  
b) To abjure violence  
c) To uphold and protect sovereignty of India  
d) To make scientific improvement
25. The ground for the impeachment of President is  
a) Failure to follow the advice given by the Prime Minister  
b) Unable to discharge his duties due to old age  
c) Violation of the constitution  
d) Misbehaviour with foreign dignitaries.
26. The size of the Union council of ministers including Prime Minister shall not be more than \_\_\_\_\_ percent of the members strength of Lok Sabha.  
a) 10  
b) 15  
c) 18  
d) 20



# CBCS SCHEME

USN

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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  $\lambda$ . (06 Marks)
- c. Find  $\lambda$ , 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  $x^2 y z^3$  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  $\phi = xy^2 z^3 - x^3 y^2 z$ , 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)

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Third Semester B.E. Degree Examination, Dec.2018/Jan.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 ಪಡಿಸಲಾಗುವುದು.
4. ಕೇವಲ ಒಂದು ಉತ್ತರವನ್ನು ಮಾತ್ರ ಉತ್ತರ ಪತ್ರಿಕೆಯಲ್ಲಿ ಗುರುತಿಸತಕ್ಕದ್ದು. ಒಂದೆ ಪ್ರಶ್ನೆಗೆ ಎರಡು ಉತ್ತರವನ್ನು ಗುರುತಿಸುವುದು ಅಮಾನ್ಯ.
5. ಎಲ್ಲಾ ಉತ್ತರಗಳನ್ನು ನಿಮಗೆ ಒದಗಿಸಲಾದ ಓ.ಎಂ.ಆರ್ ಉತ್ತರ ಪತ್ರಿಕೆಯ ಹಾಳೆಯ ಮೇಲೆ ಕಪ್ಪು ಅಥವಾ ನೀಲಿ ಶಾಹಿಯ ಬಾಲ್‌ಪಾಯಿಂಟ್ ಪೆನ್ನಿನಿಂದ ಗುರುತು ಮಾಡಬೇಕು.

1. ಪತ್ರ ವ್ಯವಹಾರ - ಮನವಿಗಳಲ್ಲಿ ಇರಬೇಕಾದದ್ದು :  
ಅ) ಸ್ಪಷ್ಟ ಮಾಹಿತಿ  
ಬ) ನೇರ ನಿರೂಪಣೆ  
ಕ) ಸೌಜನ್ಯ  
ಡ) ಮೇಲಿನ ಎಲ್ಲವು
2. ಸಚಿವ + ಆಲಯ = ಸಚಿವಾಲಯ, ಇಲ್ಲಿರುವ ಸಂಧಿ :  
ಅ) ಸುವರ್ಣ ಸಂಧಿ  
ಬ) ಸರ್ವಧೀರ್ಘ ಸಂಧಿ  
ಕ) ರಾಜಯೋಗ ಸಂಧಿ  
ಡ) ವೃದ್ಧಿ ಸಂಧಿ
3. 'ವಿಶ್ವ ಮಾನವತೆ' ಎನನ್ನು ಪ್ರತಿಪಾದಿಸುತ್ತದೆ?  
ಅ) ಕಂದಾಚಾರ  
ಬ) ಮೂಢನಂಬಿಕೆ  
ಕ) ಸಾಮರಸ್ಯ-ಸಹಿಷ್ಣುತೆ  
ಡ) ಮತೀಯ ದ್ವೇಷ
4. 'ಪಡುವಣ' ಪದದ ವಿರುದ್ಧಾರ್ಥಕ ಪದ  
ಅ) ಕೊಂಕಣ  
ಬ) ಬಡಗಣ  
ಕ) ತೆಂಕಣ  
ಡ) ಮೂಡಣ

5. 'ನಾನು ನಿನ್ನ 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) ಜಾತಿಯತೆ  
 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) ಅಘಜಲಪುರ 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) Daugher 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. Niivu 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