



E-NOTICE

Date - 17/02/2022

Subject : DIPLOMA 1ST YEAR ASSIGNMENT QUESTION

DIPLOMA-1ST SEM – (CST+EE+ME+CE)-THEORY

PAPER NAME : MATHEMATICS-I

PAPER CODE: MATH-I

Answer the following

1. Show that $7\log \frac{10}{7} - 2\log \frac{25}{24} + 3\log \frac{81}{80} = \log 2$.
2. If the roots of the equation $x^2 - px + q = 0$ differ by unity, then show that $p^2 = 4q + 1$.
3. If α, β are acute angles and $\cos 2\alpha = \frac{3\cos\beta - 1}{3 - \cos 2\beta}$, show that $\tan \alpha = \sqrt{2}\tan \beta$.
4. If $\cos^{-1} x + \cos^{-1} y + \cos^{-1} z = \pi$ show that $x^2 + y^2 + z^2 + 2xyz = 1$.
5. If α, β are the roots of the quadratic equation $2x^2 + x - 1 = 0$, find the equation whose roots are $2\alpha + 1$ and $2\beta + 1$.

PAPER NAME : APPLIED PHYSICS-I

PAPER CODE :APHY-I

1. What do you mean by fundamental units? Give example.
2. Find out the dimension of energy and universal gravitational constant. Write down the limitations of dimensional analysis.
3. Draw and explain stress-strain diagram.
4. If the volume of a wire remains unchanged when subjected to a tensile strain, show that its poisson's ratio will be $\frac{1}{2}$.
5. If the longitudinal strain produced in a wire be 1%, find the volume strain of the wire. Given poisson's ratio is equal to 0.3.

PAPER NAME : APPLIED CHEMISTRY

PAPER CODE : AICHEM

1. Explain Bohr's atomic model.
2. Write down the electronic configuration of 24^{Cr} and 29^{Cu} .
3. State Aufbau principle and Hund's rule
4. State Pauli Exclusion Principle with one example.
5. What is hydrogen bond? Explain inter and intra molecular H-bonding.

PAPER NAME : COMMUNICATION SKILL IN ENGLISH

PAPER CODE: CS –I

1. Write the full forms of these following abbreviations: SOS, USA, PTO, ATM,.
6. Write a paragraph about the causes of over population and its solution.
- 7.. Write the procedure of a building construction with the help of the following flowchart:
Choose land for construction → framing the base and the structure →finishing of roof → installation of door and window → electrical installation → complete sanitation facilities – Finish of floor - wall plaster and painting.
8. Read the following passage and fill in the blanks with article and preposition.
Time and tides have their own course, their own routine as per nature's rule. They do not wait ____ anyone. A wise man makes ____ best use ____ his time. ____ time once gone never comes back. Time and tide wait ____ none.
9. Write a paragraph about the problem excessive use of smart phone among students.



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PAPER NAME : ENGINEERING GRAPHICS

PAPER CODE : EG

SHEET -1 (LETTERING , NUMBERING AND DIMENSION)

1. Write single stroke vertical letter A-Z height 27 mm and ratio 7:4 .
2. Write single stroke vertical number 0-9 height 27 mm and ratio 7:4.
3. Show two type of dimension aligned and unidirectional.

SHEET -2 (ENGINEERING SCALE)

1. As an actual distance of 4 km is shown by a line 8cm long on a map . Draw a plane scale reading in km and hect. m. (i) 5.7km (ii) 3km 3 hect.m. (iii) 220 deca.m. The scale should be long enough to measure 8km.
2. A cube of 5 cm side represent a tank of 1000m³ volume. Construct a scale to measure upto 35m and mark on it – 27m. , 23m, 34m.
3. A map 3m x 2m represent an area of 6000sqkm. Construct a scale to measure km, Hm. And Dm.
4. Distance between two point is 15cm.The real distance between them is 20 km. Draw a scale to measure upto 25 km. and mark on it a distance of 14.7 km.

SHEET -3 (GEOMETRIC CONSTRUCTION)

1. Draw an inscribe circle regular polygon having side 30mm. by general method.
2. Draw an inscribe circle regular pentagon, hexagon and heptagon having circle radius 30mm.

SHEET -4 (ENGINEERING CURVE)

1. Draw an ellipse having major and minor axis are 100mm and 60mm respectively by constant circle , oblong and four centre method.
2. Draw ellipse when distance of focus from directrix is equal to 50mm and eccentricity 2/3.
3. Draw a parabola having base120mm. and vertical height 100mm. by rectangle method.
4. Draw involute of a regular pentagon of side 30mm.

DIPLOMA-1ST SEM – (CST+EE+ME+CE)-PRACTICAL

PAPER NAME :APPLIED PHYSICS-I lab

PAPER CODE : LAPHY-I

1. Determine two wavelength of a monochrome light by Newton's Ring Method.
2. Determine the Hall co-efficient of a semiconductor by four probe Method.
3. Determine the Band Gap of a Semiconductor.
4. Determine the Young's Modules of a rectangular bar issuing flexure beam Method.
5. Determine the specific charge(e/m) of Electron by J.J.Thomson's Method.
6. Determine the value of Plank's constant using photocell

PAPER NAME :APPLIED CHEMISTRY LAB

PAPER CODE :LACHEM

- A. Write down the confirmatory test of Sulphide ion.
- B. Write down the Confirmatory Test of Nitrate ion.
- C. Write down the Confirmatory Test of Copper ion.
- D. Write down the Confirmatory Test of Nickel ion.

By Order, Authorised Signatory