ENGLISH

Paper Code: D-16

Printed Pages: 4

Roll No.(*

1. Write an essay on any one of the following in about 300 words:

(a)スーパーチャイルド
(b) スーパーマン
(c) スーパーマン(日語)
(d) スーパーマン(英語)

2. Supply synonyms of the following in any order:

(a) 聞く
(b) 信用
(c) 友情
(d) 価値
(e) 議論

3. Write a essay on any one of the following in about 300 words:

(a) The role of English in Higher Education
(b) Dream of a small city
(c) An Indian Farmer

4. Supply antonyms of the following in any order:

(a) Dark
(b) Long
(c) Slow
(d) Clever
(e) Repair

5. Write an essay on any one of the following in about 300 words:

(a) Joy
(b) Heat
(c) Sleep
(d) Door

6. Define any of the following giving suitable examples:

(a) Alliteration
(b) Antonym
(c) Pronoun
(d) Monologue

Choose the correct option (multiple or single) to complete the sentence:

1. Answer any two of the following questions in about 100 words each.

2. What is your opinion on the poem, "Another Woman"?

3. Comment on the issues raised to gender dysphoria.

4. Comment on the significance and role of time in the poem, "When You are Old..."

5. "I envy..." describe fiction (to read, reading)

6. "What is..." Who are the characters?

7. If they were... differently, they will meet their
carries.

8. If you... hard, you would have passed (work)

9. If you... hard, you will work hard.

10. If you... hard, you will pass (work)

11. If you... work, you will pass (work)

12. Unless we walk faster, we may fail the test.

13. He says that honesty is the best policy.


15. I agree that he is a good singer.

16. Please put the books back in the table.

17. He goes to the University by foot.

18. Are you going for the party?

19. The purse is below the pillow.

20. Rewrite the following sentences correctly.

a) (b) He has decided to be a lawyer.

b) (c) The principal (to meet, meet?)
प्रारंभिक चिठ्ठी

6×2=12

HINDI Compulsory

GMT/D-16

maximum marks : 80
PUNJAB (Elective)

CSM / D-16

Principle Papers: 4

Roll No.
8 × 2 = 16

(नियत/खंड)

I. यदि हमें दिखाया गया है कि एक ही समय के लिए दो विभिन्न निर्देशन हैं, (II)
II. यदि हमें दिखाया गया है कि एक ही समय के लिए दो विभिन्न निर्देशन हैं, (I)

(संस्कृत/कक्ष)

I. यदि हमें दिखाया गया है कि एक ही समय के लिए दो विभिन्न निर्देशन हैं, (III)
II. यदि हमें दिखाया गया है कि एक ही समय के लिए दो विभिन्न निर्देशन हैं, (II)

(संस्कृत/तत्त्व)

I. यदि हमें दिखाया गया है कि एक ही समय के लिए दो विभिन्न निर्देशन हैं, (I)
II. यदि हमें दिखाया गया है कि एक ही समय के लिए दो विभिन्न निर्देशन हैं, (II)

Compulsory
SANSKRIT

GSM / D-16

Maximum marks : 80
Time allowed : 3 hours
Printed Pages : 3
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$4 	imes 2 = 8$</td>
<td>(1)</td>
</tr>
<tr>
<td>2</td>
<td>$2 	imes 5 = 10$</td>
<td>(2)</td>
</tr>
<tr>
<td>3</td>
<td>$5$</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>$4 	imes 2 = 8$</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>$8$</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
- She is in the house.
- He is in the house.

**Questions:**
1. What time is it?
2. What is the answer to this problem?
3. What is the solution to this equation?
4. What is the value of this expression?
5. What is the result of this calculation?
6. What is the product of these numbers?
7. What is the sum of these numbers?
8. What is the difference between these numbers?
9. What is the quotient of these numbers?
8 = 1 \times 8

1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO }

1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO }

: 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } (3)

8 = 4 \times 2

1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO }

1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO }

: 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } (4)

8 = 6 \times 1

1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO }

1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO }

: 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ izeso } (5)

5 = 1 \times 5

1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO }

1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO }

1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO }

1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO }

1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ izeso } (6)

10 = 2 \times 5

1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO }

1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ IZESO } + 1 \text{ izeso } (7)
Choose the correct answer:

Compulsory Question (Answer Any 3)

1. The word 'Mirand' was a
   (a) Pundit
   (b) Aryan word
   (c) Thika
   (d) None of the above

2. 
   (a) 1266
   (b) 1276
   (c) 1286
   (d) 1296

3. The political condition of India in 1526 was
   (a)统一
   (b) 印度
   (c) 静
   (d) 合

4. On the outline Map of India, show the
   (a) British Empire
   (b) Mahattan Empire
   (c) Pundit
   (d) None of the above

5. On the outline Map of India, show the political condition of India in 1526.
   (a) 印度
   (b) 南
   (c) 北
   (d) 东

6. Choose the correct answer:

   (a) Boxer completed the work of Pressy's "discuss"
   (b) 1875 is the date for the British Empire
   (c) 1865 is the date for the British Empire
   (d) Buxor completed the work of Pressy's "discuss"

7. Discuss the important causes for the downfall of the Mughal
   Empire.

8. Write a critical note on Partition System.

9. On the outline Map of India, show the
   (a) British Empire
   (b) Mahattan Empire
   (c) Pundit
   (d) None of the above

10. On the outline Map of India, show the political condition of India in 1526.
    (a) 印度
    (b) 南
    (c) 北
    (d) 东

Political History of India (1526-1857)

Paper - Option (b)

HISTORY

GS/M D-16

896

Time allowed : 3 hours

Maximum marks : 80
1. Discuss the Evolution of the Religious Policy of Akbar.

2. Who was considered as a forerunner of Akbar?
   (a) Sher Shah Suri
   (b) Humayun
   (c) None
   (d) Bahadur Shah Zafar

3. Who was the last Mughal Emperor?
   (a) Shah Jahan
   (b) Aurangzeb
   (c) Bahadur Shah Zafar
   (d) None

4. In which year Aurangzeb imposed Jizya?
   (a) 1680
   (b) 1679
   (c) 1678

5. In which year Aurangzeb imposed Jizya?
   (a) 1680
   (b) 1679
   (c) 1678

6. Who was the leader of Revolt of 1857 in Bihar?
   (a) Kunwar Singh
   (b) Nana Sahib
   (c) Tanaji Topa
   (d) Bahadur

7. Who was the Nawab of Bengal in 1788 A.D.?
   (a) Siraj-ud-Daula
   (b) Mir Jaffar
   (c) Mir Kasim
   (d) None

8. In the year 1785-86?
   (a) 1785
   (b) 1786
   (c) 1787
   (d) None
Examine the utilitarianism theory of Bentham.

Explain the political ideas of Locke.

Critically examine Hobbes’s ideas on sovereignty.

Critically examine Aristotle’s theory of justice.

Critically examine Plato’s theory of justice in Republic.

Discuss the basic ideas of Karl Marx’s political thought.

Note: All questions carry equal marks.

Western Political Thinkers
Paper 1 (Oct)

POLITICAL SCIENCE

Examined: 3 Hours

Maximum marks: 80
1. When was the relationship between Bentham and Mill?

(a) (b) (c) (d)

Who provided the psychological basis of utilitarianism?

(a) Bentham (b) Locke (c) Hobbes (d) I. S. Mill

Who wrote Fragments on Government?

(a) (b) (c) (d)

Who wrote "The Republic"?

(a) (b) (c) (d)

Who is known as the father of "Realism"?

(a) Bentham (b) Locke (c) Hobbes (d) I. S. Mill

When did Hobbes die?

(a) 1472 (b) 1679 (c) 1677 (d) 1676

When did Mill die?

(a) 1472 (b) 1471 (c) 1677 (d) 1675

Who was the Republic of Athen's views on democracy?

(a) (b) (c) (d)

Opinion type questions:

9. Two (2)

16. Two (2)

16. Two (2)

Although some views of FIFO in

2x8=16

2x8=16

2x8=16
During recession, there is __________ in income and __________ in output.

(iii) Unemployment is __________.

Keynes is of the view that main cause of unemployment

(i) __________ is the basic parameter of macro economics.

(ii) __________ in the analysis.

(iii) __________ in the bonds.

9. Critically examine the Fisher's equation of quantity theory of money.

8. Define Money. When are the functions of money?

Lini-1V (संख्या-IV)

6. When is Investment Multiplier? Why is the relationship between interest rate and investment?

5. What is Trade Cycle? What are the various phases of trade cycle?

4. What is meant by marginal efficiency of capital? Discuss.

Lini-III (संख्या-III)

3. Offshoots of capital, the various short-run and long-run factors affecting marginal efficiency of capital.
Supply creates its own demand. Critically examine the

**Unit II (Chap-11)**

1. What is the relationship between the two? How can it be measured? What are the difficulties in the measurement of national income? How can it be

2. What do you mean by national income? How can it be

3. **UNIT I (Chap-10)**

2×8=16

- (a) Export of goods from a
- (b) Inflow of money from the income
- (c) Inflow of goods from the income
- (d) None of the above

2×8=16

The main function of money is store of value:

\[ \text{MEC} = 1 - \frac{SP}{AD} \]

The formula of MEC is

(b) True

Since whether the following statements are True or False
PAPER—THEORY

HEALTH AND PHYSICAL EDUCATION

GSM / D-16

[Turnover]

(Answer to each question must be in English)

1. Explain the preventive measures of AIDS and Dengue.

2. Discuss the principles for prevention of sports injuries.

3. What are methods of prevention and control of communicable diseases?

4. [Question not fully visible]
(x) the any two functions of heart.
(x) How you will prevent malaria?
(xii) Name any two allergy related diseases.
(xii) Define Sympathetic Viscera.
(xii) Heart attack is the problem?
(xii) What is junk-food.
(vii) Define balanced diet.

9. Define Safe Education.

8. Discuss the various effects of exercise on circulatory system.

7. Explain the structure of heart with diagram.

6. When are factors affecting balanced diet?

5. Discuss the component of balanced diet and their sources in

4. When is HIV?

3. When are communicable diseases?

2. When is abortion?

1. After failed the trial election!
Unit-III (चौथा के-iii)

9. Express your views about the role of science in Promoting Educational and cultural aspects of music during modern period.


Unit-II (चौथा के-ii)

8. Write down the definition of ‘Own-Known’ of your syllabus along with three examples and four trans.

3. Write down the note that ‘Slow-Known’ of your syllabus along with three examples and four trans.

7. Write down the Dham and Channan of (en), (en-chanan).

I. Write a detailed description of Kyea Malkanas.

II. (क्वत्-के-ii)

8. Write down the short note on the following:

6. Write the down the Placement or Swar on Shruti by Locman.

5. Write in detail about New or Nyay.


Paper-Theory P-1

Music (vocal)

GSM/D-16

Time allowed: 3 hours
1. Write in your own words about the origin and development of the Sharn Yedun.
2. Write on the sketch of Uzun Volter Khan and his style of Section C (90-9).
3. Write a detailed description of Uzun Volter Khan's style and his method of Winning.
5. Short notes on the following:
   (a) Alphabet-Phonography
   (b) Pronunciation
   (c) Vocabulary

Time allowed: 3 hours

Paper-Theory (Starr)
Written Paper: 2

MUSIC (Instrumental)
GSM / D-16

Note: The question paper is divided into 3 sections, comprising 10 questions in all. The candidates may be required to attempt 2 sections in all. The candidates may be required to attempt 5 questions in all. All questions carry equal marks.

(c) Detailed description of the following terms:
   (a) Cipher
   (b) Cryptography
   (c) Cryptanalysis
   (d) Decipherment
   (e) Decryption
   (f) Enigma

When do you know about the ascension rule and Belshazzar's Feast?
10. Write note on the following:
   (i) Share Purchase
   (ii) Share Transfer
   (iii) Share Certificate

9. When is mean by allotment of share? Explain the provision.

8. When do you mean by Reduction of share capital? Explain the provision.

7. Define Promoter. Discuss his function and legal position.

6. "The position of the Company Secretary is the same as that of the
   director of the company secretary.

5. Define the term Company Secretary. Explain the qualification.

4. What is Corporate Voluntary winding up? When it is proceed?

3. State in brief the various kinds of companies which can be
   registered under the Companies Act 1956.

2. Define the term cooperative society. Clarify the difference
   between cooperative society and company.

1. Explain the role of Secretary in an Educational Society.

Note: Attempt any five questions. All questions carry equal
maximum marks: 80

Time allowed: 3 hours

Office Management

GSM/D-16

Page 16
(e) Define saddle point.
(f) Define principal normal.
(g) Define Bilinear theorem for homogeneous function.
(h) State the Lagrange mean value theorem.
(i) Give example.

1. (a) What is the relation between continuity and differentiability?

(Composite Question) [2marks]

1. (b) What is the necessary and sufficient condition for a function to be differentiable at a point?

Composite: 1. Question from each section. Question No. 1 is compulsory. All questions in all sections at least one.

Vote: 

Maximum marks: 27

Paper: B.M. 231

Mathematics

GCN/D-16

Printed Pages: 8

ROHNO. 929

\[ q = z + (\theta \sin - \lambda \lambda \theta \sin - \lambda \lambda \theta \cos - x) \]

Find the envelope of the sphere

(8)
Show that there does not exist \( \lim_{x \to 0} \left( x^3 \right) \).

(a) \( \frac{x}{x \tan x} \) as \( x \to 0 \).

(b) \( \frac{x}{x \tan x} \) as \( x \to 0 \).

Section II 2.2

Let \( f \) be defined as

\[
(0,0) = (x, x) \quad 0
(0,0) = (x, x) \quad \frac{x}{x^2}
(0,0) \neq (x, x) \quad \frac{x}{x^2}
\]

Then there exists at least one real number \( x \) between

\[
0 = u + \frac{v}{w} + \cdots + \frac{v}{w} + \frac{v}{w}
\]

Prove that if \( a, b, c \) are real numbers such that

\[
0 = u + \frac{v}{w} + \cdots + \frac{v}{w} + \frac{v}{w}
\]

By definition, prove that

Section I 2.2

\[
0 = u + \frac{v}{w} + \cdots + \frac{v}{w} + \frac{v}{w}
\]

By definition, prove that
The page contains mathematical expressions and equations. The text is too fragmented to provide a coherent transcription. The expressions seem to deal with calculus or related fields, possibly involving functions, limits, and continuity. The page appears to be part of a textbook or lecture notes, with some sections marked off with ticks and dashed lines.
Show that the radius $R$ of the spherical curvature is
given by

$$R = \frac{d}{d\phi}$$

Find the curvature and the point of the curve:

For the curve $x = a \cos \phi$, $y = a \sin \phi$, $z = c \cos 2\phi$

$$\kappa = \frac{q}{z + \lambda - x}$$

Prove that the osculating plane at the point $t = 1$ of the curve given by

$$y = z = c \cos \phi$$

Section 1A, page 1A

Prove that the osculating plane at the point $t = 1$ of the curve given by

$$y = z = c \cos \phi$$

Find the maximum and minimum distance of the point

Examine for maximum and minimum values the function

$$f(x, y, z) = (x, y, z)$$

where

$$0 \neq (x, y, z) = \left( \frac{x - \lambda}{\sqrt{x^2 + y^2 + z^2}} \right)$$

may exist at point but the function is not continuous.
\( 2 \frac{\text{P} \cdot \text{T} \cdot \text{O}}{\text{Y}} \)

\[
\begin{align*}
(\lambda + x)z &= b \left( x + z \right) - d \left( x - z \right) x \quad \text{Solve:} \quad zy = x^2 + yz + dx \quad \text{and} \quad 2 \\
(\frac{\text{P} \cdot \text{T} \cdot \text{O}}{\text{Y}}) &
\end{align*}
\]

Unit 1

\( 1 \frac{\text{P} \cdot \text{T} \cdot \text{O}}{\text{Y}} \)

Find the complete integral of

\[
0 = z \left( x + y \right) \\
\text{Solve the equation:} \quad 0 = x + y
\]

Examine the compatibility of system of partial equations

\[
l \approx x + y \\
\text{and the equations:} \quad l = x + y
\]

From the partial differential equation by eliminating

\[
\text{Examples of partial differential equation)
\]

\text{Computation Question}

All questions carry equal marks.

Question from each unit. Question No. 1 is compulsory.

Note: Attempt five questions in all selecting at least one

Maximum marks: 20

Time allowed: 3 hours

PARTIAL DIFFERENTIAL EQUATIONS

PAPER-BM-232

MATHEMATICS

GSM / D-16
\[ 0 = \left( \frac{\partial^2 f}{\partial t^2} \right) \]

and \( \lambda \mu \geq \pm \sin \nu x \) \( \forall \nu \geq 0 \) \( \forall \lambda \geq 0 \) \( \forall \mu \geq 0 \).

And 0 = (1, 0, \lambda) \( \forall \nu = 0 \) \( \forall \lambda \geq 0 \) \( \forall \mu \geq 0 \).

Solve the two-dimensional wave equation:

\[ \frac{\partial^2 f}{\partial x^2} - \frac{\partial^2 f}{\partial t^2} = 0 \]

subject to the boundary conditions:

\[ \frac{\partial f}{\partial x} \bigg|_{x=0} = \frac{\partial f}{\partial x} \bigg|_{x=L} = 0 \]

\[ f \bigg|_{t=0} = g(x) \]

\[ \frac{\partial f}{\partial t} \bigg|_{t=0} = h(x) \]

\[ f(x, t) = A \sin \left( \frac{\pi x}{L} \right) \cos \left( \frac{\pi t}{T} \right) + B \cos \left( \frac{\pi x}{L} \right) \sin \left( \frac{\pi t}{T} \right) \]

\[ f(x, t) = \sum_{n=1}^{\infty} \left( A_n \sin \left( \frac{n \pi x}{L} \right) + B_n \cos \left( \frac{n \pi x}{L} \right) \right) \sin \left( \frac{n \pi t}{T} \right) \]

\[ f(x, t) = \sum_{n=1}^{\infty} \left( A_n \sin \left( \frac{n \pi x}{L} \right) + B_n \cos \left( \frac{n \pi x}{L} \right) \right) \sin \left( \frac{n \pi t}{T} \right) \]

\[ f(x, t) = \sum_{n=1}^{\infty} \left( A_n \sin \left( \frac{n \pi x}{L} \right) + B_n \cos \left( \frac{n \pi x}{L} \right) \right) \sin \left( \frac{n \pi t}{T} \right) \]

\[ f(x, t) = \sum_{n=1}^{\infty} \left( A_n \sin \left( \frac{n \pi x}{L} \right) + B_n \cos \left( \frac{n \pi x}{L} \right) \right) \sin \left( \frac{n \pi t}{T} \right) \]

\[ f(x, t) = \sum_{n=1}^{\infty} \left( A_n \sin \left( \frac{n \pi x}{L} \right) + B_n \cos \left( \frac{n \pi x}{L} \right) \right) \sin \left( \frac{n \pi t}{T} \right) \]

\[ f(x, t) = \sum_{n=1}^{\infty} \left( A_n \sin \left( \frac{n \pi x}{L} \right) + B_n \cos \left( \frac{n \pi x}{L} \right) \right) \sin \left( \frac{n \pi t}{T} \right) \]

\[ f(x, t) = \sum_{n=1}^{\infty} \left( A_n \sin \left( \frac{n \pi x}{L} \right) + B_n \cos \left( \frac{n \pi x}{L} \right) \right) \sin \left( \frac{n \pi t}{T} \right) \]

\[ f(x, t) = \sum_{n=1}^{\infty} \left( A_n \sin \left( \frac{n \pi x}{L} \right) + B_n \cos \left( \frac{n \pi x}{L} \right) \right) \sin \left( \frac{n \pi t}{T} \right) \]

\[ f(x, t) = \sum_{n=1}^{\infty} \left( A_n \sin \left( \frac{n \pi x}{L} \right) + B_n \cos \left( \frac{n \pi x}{L} \right) \right) \sin \left( \frac{n \pi t}{T} \right) \]

\[ f(x, t) = \sum_{n=1}^{\infty} \left( A_n \sin \left( \frac{n \pi x}{L} \right) + B_n \cos \left( \frac{n \pi x}{L} \right) \right) \sin \left( \frac{n \pi t}{T} \right) \]

\[ f(x, t) = \sum_{n=1}^{\infty} \left( A_n \sin \left( \frac{n \pi x}{L} \right) + B_n \cos \left( \frac{n \pi x}{L} \right) \right) \sin \left( \frac{n \pi t}{T} \right) \]

\[ f(x, t) = \sum_{n=1}^{\infty} \left( A_n \sin \left( \frac{n \pi x}{L} \right) + B_n \cos \left( \frac{n \pi x}{L} \right) \right) \sin \left( \frac{n \pi t}{T} \right) \]

\[ f(x, t) = \sum_{n=1}^{\infty} \left( A_n \sin \left( \frac{n \pi x}{L} \right) + B_n \cos \left( \frac{n \pi x}{L} \right) \right) \sin \left( \frac{n \pi t}{T} \right) \]

\[ f(x, t) = \sum_{n=1}^{\infty} \left( A_n \sin \left( \frac{n \pi x}{L} \right) + B_n \cos \left( \frac{n \pi x}{L} \right) \right) \sin \left( \frac{n \pi t}{T} \right) \]

\[ f(x, t) = \sum_{n=1}^{\infty} \left( A_n \sin \left( \frac{n \pi x}{L} \right) + B_n \cos \left( \frac{n \pi x}{L} \right) \right) \sin \left( \frac{n \pi t}{T} \right) \]

\[ f(x, t) = \sum_{n=1}^{\infty} \left( A_n \sin \left( \frac{n \pi x}{L} \right) + B_n \cos \left( \frac{n \pi x}{L} \right) \right) \sin \left( \frac{n \pi t}{T} \right) \]

\[ f(x, t) = \sum_{n=1}^{\infty} \left( A_n \sin \left( \frac{n \pi x}{L} \right) + B_n \cos \left( \frac{n \pi x}{L} \right) \right) \sin \left( \frac{n \pi t}{T} \right) \]
2. (a) Plane.

Also show that the equilibrium of the rod is stable. 

3. and the other along the plane. Find the inclination of the rod to the horizontal. To do this on a smooth plane by two forces.

A body is sustained on a smooth plane by two forces.

Plane: 3. 

2. (b) State converse of Lami's Theorem.

1. Define central axes.

2. Join of a parallelogram.

3. Find the centre of gravity of a thin uniform lamina in the direction.

1. Find the resultant of a force equal to 60 kN in a direction making an angle equal to 70° with its direction.

\[ \mathbf{F} = \begin{pmatrix} 4 \\ 3 \end{pmatrix} \]

5. Find the null point of the plane \( x + y + z = 1 \) for the system of forces (X, Y, Z).

7. Forces are equal each equal to \( \frac{2}{R} \) which are inclined at a given angle \( \theta \) to \( 2a, \) is \( \frac{2K}{R} \) coa and the two forces which are collinear to a given system (R, K) and are invariant for any given system of forces, whatever is \( (Z + X) = (Z + X) \) and \( (X + Y) = (X + Y) \).

2. (a) Define Vernier and show that the minimum distance between two \( Z \) is \( (Z + X) = (Z + X) \) or \( (X + Y) = (X + Y) \) on the surface.

Time allowed: 3 hours

Maximum marks: 27

Statistics

Paper - BM-233

Mathematics

GSM / D-16
A ladder of length 2a and weight W with its center of gravity at a distance of 8/3 of the way up. It stands on a smooth horizontal floor. Show the magnitude of the force of friction on the ladder at each end and the direction of the reaction at the hinge on the rod and at the floor. Apply the Horizontally at A. Find the magnitude of the force of reaction at the hinge at A and B. Find the horizontal reaction at the hinge at A by reason of a smooth hinge. If it is a frictionless hinge, then it is a smooth hinge. It is a frictionless hinge.

A rectangular lamina ABCD rests with the sides AB, BC, CD, DA on two smooth parallel planes. Prove that it is a smooth hinge.

The vertical projection of the lamina ABCD on the horizontal plane of the lamina ABCD is a rectangle. Find the length of the rectangle.

\[ \frac{a + \frac{2}{3}a}{\frac{a}{2}} = \frac{2a}{a} \]

The vertical projection of the lamina ABCD on the horizontal plane of the lamina ABCD is a rectangle. Find the length of the rectangle.

\[ \frac{a + \frac{2}{3}a}{\frac{a}{2}} = \frac{2a}{a} \]

The vertical projection of the lamina ABCD on the horizontal plane of the lamina ABCD is a rectangle. Find the length of the rectangle.

\[ \frac{a + \frac{2}{3}a}{\frac{a}{2}} = \frac{2a}{a} \]

The vertical projection of the lamina ABCD on the horizontal plane of the lamina ABCD is a rectangle. Find the length of the rectangle.

\[ \frac{a + \frac{2}{3}a}{\frac{a}{2}} = \frac{2a}{a} \]
To feel the passion of eternity?
To face the stars and search the heavens for power;
To have dominion over sea and land.
In this time the Lord God made and gave or
As ever in any great task-Master's eye.
All's if I have grace to use it so.
Towards which time leads me, and the will of Heav'n:
To that same for however mean or high,
It shall be still in sincerest measure.
Yes be it less or more, or soon or slow.
I. Explain the following lines with reference to the context: 6×2=12

Note: Attempt all questions.
Maximum marks: 80

Time allowed: 3 hours
The poem 'A Psalm of Life' is a hymn of faith and courage.

1. The secret of Laugher's secret strength?
2. Why did Yael refuse to marry Devan?
3. Why was the effect of Panasonic's fine on Karna?
4. Why did Devan refuse to?

6. Answer any six out of the following questions:

(a) Assume (b) Prone (c) Marvel
(d) Leave (e) Return (f) Reveal
(g)馹 (h) Maintain (i) Divine

Choose the correct alternative:

(i) A discussion
(ii) Expressive
(iii) Vivid

5. Choose any four of the following words and phrases in sentences of your own:

(a) The string of Exaggeration by Dhima
(b) Which water of the following words and phrases in sentences
(c) How was Kamla born to her?
(d) Woods on a snowy evening
(e) Bring out the symbolic significance of the poem 'Stopping by

2. Answer any four of the following questions briefly choosing at

No onward show of heathenistic baronial was

river and performed the prologue of pillared tiers

garments as became sorrowful Khiram and vow in the

conquered by their dress because in single

token of tomorrow for Pandora when they believed

Dhima and his some cast of their royal garments in

King and disappeared.

Then she pressed the boy, handed him to his father, the
Health and Physical Education

Unit-IV (4.1-9.4)

9. What is Safety Education?

Computer Question (Objective Type)

Unit-II (4.1-4.3)

2. Explain the types of injury to the cardiovascular system.

Unit-I (3.1-3.6)

1. Explain the function of the heart.

Explain the importance of physical fitness.

Describe the difference between cardiovascular diseases.

Describe the modes of transmission and prevention of communicable diseases.

Discuss the types and causes of sports injuries.

Discuss the effects of exercise on the circulatory system.

Note: Attempt two questions in all, selecting one question from each unit.
8 10. Describe the different styles of Qawwals.
8 8. Explain the contribution of Ustad Abdul Halim Jaffer Khan.
Section-C (Q=3-2)
8 7. What do you mean by Swarabhinand.
8 6. Explain the method of playing of your Musical Instrument and
(a) Har
(b) Kirtan
(c) Swarabhinanda
8 4+4=8
Section-B (Q=2 - 2)
8 5. Write the short notes on any two of the following terms:
(a) Amravati-Bharati
(b) Maessar Khamma Gitar
(c) Parent Presesh Kitar
(d) 
8 4+4=8
Section-A (Q=2 - 2)
8 4 Write the notation of the "Maschidul Qanat" of any one raga of
8 3. When describing the tabla "Lama", write the notation in Ekmai.
8 2. Give a detailed description of Raga "Jagatwanti".
8 1. Write the notation of the "Kashish" of any one raga of
The marks of each section are equal
Note: Attempt five questions in all selecting at least one from each section.
Maximum marks: 40
Time allowed: 3 hours

Paper-I (Theory)

Music Instrumental

OCEM / D - 16

Prepared Pages: 2
Roll No.