1. (a) How is the world broken by narrow domestic walls?
(b) How do you essentialize recent his brokend?
(c) For the Duke?
(d) Whose name did Gainsborough cast in bronze?
(e) Why does the poet refer to the man as cold passional?
(f) Grace.

2. (a) Explain the line: the parts of glory lead but to the
(b) Name the writer of the poem, Know Thyself.
(c) Phrase/sentence: 

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

(a) Fortitude (vii) Vanderbilt
(b) I love you (ix) Roux
(c) Wise (x) Rau
(d) Tender (xiii) Fresh
(e) Presence (x) QuROWN
(f) Empty

Give synonyms for the following words: Do any five.

1. For blank candidates only.

(a) Company (vii) Awake
(b) Reason (v) Reason
(c) Nature (vi) External
(d) Prediction
(e) Attention

2. Give phonetic transcription of any five words.

3. Define any one of the following giving suitable examples:

(4)
4. Choose the correct option to complete the sentence:

Choose the correct option to complete the sentence:

- (a) I was a plumber. (b) I was a plumber.
- (b) I was a plumber. (c) I was a plumber.

5. Explain the meaning and significance of the poem, "Modern Mechanic". Discuss the theme of the poem and its relevance to modern society. Support your answer with detailed examples from the text. (15 marks)

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

(a) Answer any two of the following questions in about 100 words each:

- What makes the woman uncomfortable in 'Anothe
- Why are the banana sellers gone to the temple
- Why is the river polluted with garbage?
लिखित हमारे लिए महत्वपूर्ण है।

लिखित हमारे लिए महत्वपूर्ण है।

लिखित हमारे लिए महत्वपूर्ण है।

लिखित हमारे लिए महत्वपूर्ण है।

लिखित हमारे लिए महत्वपूर्ण है।

लिखित हमारे लिए महत्वपूर्ण है।

लिखित हमारे लिए महत्वपूर्ण है।

लिखित हमारे लिए महत्वपूर्ण है।

लिखित हमारे लिए महत्वपूर्ण है।

लिखित हमारे लिए महत्वपूर्ण है।

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लिखित हमारे लिए महत्वपूर्ण है।
<table>
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<th>Expression</th>
<th>Result</th>
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<tbody>
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<td>16</td>
</tr>
<tr>
<td>2.</td>
<td>$6 \times 2$</td>
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</tr>
<tr>
<td>7.</td>
<td>$2 \times 8$</td>
<td>16</td>
</tr>
</tbody>
</table>

Note: The expressions and results are in Bangla.
2. 7 = 2, 11 = 0, 17 = 0

(a) (b) (c) (d) (e) (f) (g) (h) (i) (j) (k) (l) (m) (n) (o) (p) (q) (r) (s) (t) (u) (v) (w) (x) (y) (z)

6×6=36

1. निम्नलिखित आधार पर उत्तर दीजिए।

Maximum marks : 80

Time allowed : 3 hours

Hindi Elective

GSM / D-17

Practiced Pages : 3
7. $L = 7 \times 1$ : 네모형으로 나타낼 때
   
   \[ L = 7 \times 1 \]

8. $2 \times 4 = 8$ : 네모형으로 나타낼 때
   
   \[ 2 \times 4 = 8 \]

9. $8 \times 1 = 8$ : 네모형으로 나타낼 때
   
   \[ 8 \times 1 = 8 \]
Journalism, Archdeacon, Example, Demon, Divine, Epic, Force, Folksonye, Literature, Actor, Biography, Comedy, Concept, Content, Director, Issue, Location, Plot, Performance, Power, Publisher, Race, Region, Report, Rights, Script, Setting, Style, Term, Theatrical, Theme, Title, Type, Unit, Visual, Writing
8

\[ 4 \times 2 = 8 \]

\[ \frac{1}{2} + \frac{1}{2} = 1 \]

\[ \frac{1}{2} + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} = 2 \]

\[ \frac{1}{2} + \frac{1}{2} + \frac{1}{2} \]

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(2)

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(12)

(13)

(14)
1. Answer the following questions:

Comprehension Question:

Candidats only!

on map will carry full marks for visually handicapped candidates. The point relating to the explanatory note one question from each unit. Question No. 1 is

Note: Attempt five questions in all. Selecting at least

Maximaun marks: 80

Time allowed: 3 hours

Political History of India (1526-1857 AD)

HISTORY

GSM / D - 17

Maps of India
9. On the outline map of India, show the Mughal Empire at
1526 A.D. Also write an explanatory note.

10. On the outline map of India, show the political condition of India
at the death of Aurangzeb in 1707. Also write an explanatory note.

11. Describe the provincial and local administration of the Mughal
emperors.

12. When do you know about the cause and significance of Guru
Dass's marriage?

13. Critically examine the religious policy of Aurangzeb.


(i) What was the immediate cause for the uprising of 1857?
(ii) In which year was a treaty signed by Lord Dalhousie?
(iii) The battle of Plassey was fought in which year?
(iv) Who was the last Mughal Emperor?
(v) In which year Vasco-da-Gama reached India?
(vi) Give a brief account of the Anglo-French struggle for political
supremacy of the Decan.

(iii) Give a brief account of the Anglo-French struggle for political
(i) Describe the provincial and local administration of the Mughal

(ii) When do you know about the cause and significance of Guru

(iii) Give an account of the first battle of Plassey.

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(v) In which year Vasco-da-Gama reached India?
(vi) Give a brief account of the Anglo-French struggle for political
supremacy of the Decan.
Question 7.
Discuss Bentham's contribution to political thought.

Question 6.
Discuss John Locke's views regarding human nature.

Question 5.
Critically discuss Hobbes's view of sovereignty.

Question 4.
Discuss Machiavelli's views on religion and monarchy.

Question 3.
Discuss the main political ideas of Aristotle.

Question 2.
Discuss Aristotle's theory of reproduction.

Question 1.
Critically discuss Plato's theory of justice.

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

Time allowed: 3 hours

Administrative mark 20

ORTHOPEDIC TREATMENT

Orthopedic treatment (a)

ORTHOPEDIC EQUIPMENT

Orthopedic equipment (b)

ORTHOPEDIC PHYSICIAN

Orthopedic physician (c)

ORTHOPEDIC DIAGNOSIS

Orthopedic diagnosis (d)

ORTHOPEDIC SURGERY

Orthopedic surgery (e)

ORTHOPEDIC INJURY

Orthopedic injury (f)

ORTHOPEDIC EXAMINATION

Orthopedic examination (g)

ORTHOPEDIC THERAPY

Orthopedic therapy (h)

ORTHOPEDIC SPECIALTIES

Orthopedic specialties (i)

ORTHOPEDIC REHABILITATION

Orthopedic rehabilitation (j)

ORTHOPEDIC SURGICAL PROCEDURE

Orthopedic surgical procedure (k)

ORTHOPEDIC IMPLANTS

Orthopedic implants (l)

ORTHOPEDIC EDUCATION

Orthopedic education (m)

ORTHOPEDIC INFECTION

Orthopedic infection (n)

ORTHOPEDIC INJURY

Orthopedic injury (o)

ORTHOPEDIC PROSTHESIS

Orthopedic prosthesis (p)

ORTHOPEDIC TRAUMA

Orthopedic trauma (q)

ORTHOPEDIC EMERGENCY

Orthopedic emergency (r)

ORTHOPEDIC PAIN MANAGEMENT

Orthopedic pain management (s)

ORTHOPEDIC RADIATION THERAPY

Orthopedic radiation therapy (t)

ORTHOPEDIC REHABILITATION

Orthopedic rehabilitation (u)

ORTHOPEDIC IMPLANTS

Orthopedic implants (v)

ORTHOPEDIC EDUCATION

Orthopedic education (w)

ORTHOPEDIC INFECTION

Orthopedic infection (x)

ORTHOPEDIC INJURY

Orthopedic injury (y)

ORTHOPEDIC PROSTHESIS

Orthopedic prosthesis (z)
(a) Hopkins
(b) Hume
(c) Locke
(d) Mill

2. Who supported the open ballistic system?
(a) Hume
(b) Locke
(c) Mill
(d) Smith

2. Which of the following was the Revolution of 1688?
(a) Louis XVI
(b) Charles II
(c) Jacob II
(d) William III

2. Who was the writer of the Prince?
(a) Locke
(b) Locke
(c) Mill
(d) Smith

Who said, “Man is born free but he is everywhere in chains”?
(a) Locke
(b) Hobbes
(c) Mill
(d) Smith

2. Who was the latter of Political Science?
(a) Hobbes
(b) Locke
(c) Mill
(d) Smith

9. Objective type Questions

2. Which of the following is a principle of democracy?
(a) Majority rule
(b) Freedom of speech
(c) Equality before law
(d) Right to bear arms

Which model is described in the above study? Explain their model with the help of a diagram.

Based on this information answer the following questions:

1. Make sales not only in domestic market but also export to foreign countries. The industries have to pay taxes to the government. The industries imported the technology from Japan. For payment of which some of their wages and save the rest. The industries have spent some of their wages and save the rest. The industries have for which the households were paid wages. The households for which the households were paid wages. The industries in Japan have paid wages to household.

Note: Attempt the questions in all the four compulsory. Attempt remaining three questions. Selecting five questions in all the question no. 1 and 2 are

Time allowed: 3 hours

Maximum marks: 80

Micro-Economics-I

ECONOMICS

CM/D-17

875

Printed Pages: 8

Referred: No

Turn over
Choose the correct answers from the given alternatives:

2. (i) Identify the real and monetary flows in the above case.
   (ii) What is the difference between real and monetary
   (iii) Explain the concepts of leakages and injections.
   (iv) Study
   (v) Consumption expenditure
   (vi) Government expenditure
   (vii) Investment expenditure
   (viii) Expenditure multiplier
   (ix) Autonomous demand
   (x) Expenditure supplied
   (xi) Slope of the MEC curve
   (xii) Horizontal straight line
   (xiii) Upward from left to right
   (xiv) Downward from right to left
   (xv) A horizontal straight line

3. (a) Curvilinear
   (b) x ≥ ± (r² + t²)²

4. (a) According to Keynes, the main cause of unemployment was
   (b) ...
(a) All of these

Investment made by the private companies.

Investment made by local self government

Investment made by citizens of a country

Public investment refers to-

Ocean Lanes

Region

Key

Marshalls

Say's Law of markets was criticized by-

(2) Consumption is a function of-

(5)
1. Explain the meaning of proportionality to consume. What are the various subjective and objective factors that determine it?

2. What is consumption function? Distinguish between APC and MPC. What are their economic applications?

3. (a) Define marginal propensity to save.
(b) Define marginal propensity to consume.
(c) Write any two weaknesses of classical theory of income
(d) What is marginal efficiency of capital.
(e) What is marginal product of capital.
(f) Answer the following questions:

4. Discuss the scope and importance of micro and macro economies.

5. Supply creates its own demand. Critically examine the

6. Explain the interaction among these concepts with the help of equations.

7. (a) Micro Economics
(b) Three sections
(c) Unit (3)
(d) Unit (2)
(e) Unit I (1)
Detailed description of the following tales with Duhun and Raga Bhairavi:

Section-A (10 marks)

1. Write the notation of Melakhandan Gat in the Raga Bhairavi or Duhun.

2. (a) Raga Bhairavi

3. Detailed description of the following tales with Duhun and Raga Bhairavi:

Note: The question paper is divided into 3 sections comprising Theory, Musical (Sitar) and G.M./D-17.

Maximum marks: 40

Time allowed: 3 hours

Primed Pages: 3

Roll No.
Section C (Q43-45)

1. Write the sketch of Llarrad Vihayer Khan and his style of

2. Explain with detail

8. What is the contribution of Pt. Pandit Chowdhury towards music?

Section-B (Q43-45)

1. Write in your own words about the origin and development of

8. Detailed study about the historical development of Taal

8. Short notes on the following:

(b) Classical

(c) Pandit Prasobh Kangle

5. Indian classical music is about:
Define principal normal, binormal.

Write the necessary conditions for the function \( f(x, y) \) to

\[ f'(0, 0) \leftarrow \left( \frac{\partial f}{\partial x}, \frac{\partial f}{\partial y} \right) \]

Find the image of \( f(x, y) \)

\[ 0 \neq f'(x, y) \neq 0, \quad \frac{\lambda + x}{\lambda - x} = f'(x, y) \]

Let \( J: \mathbb{R} \rightarrow \mathbb{R} \) be defined as

\[ x \leftarrow \frac{\log(1 + x) + \tan^{-1}(x)}{\tan(1 + x^2)} \]

Evaluate

\[ \int [e^x + \sin(x)] \, dx \]

Verify Lagrange's mean value theorem for \( f(x) = \log x \).

Let \( f: \mathbb{R} \rightarrow \mathbb{R} \) be a continuous function.

Using \& definition prove that \( f(x) \) is a continuous function.

All questions carry equal marks.

Note: Attempt five questions in all, selecting at least one from each unit.

Advanced Calculus

Paper-BM-231

Maths

GSM/D-17

T 14/17

Printed Pages: 4

Roll No.

Maximum marks: 27

Time allowed: 3 hours

912

(4)
Problem 2:

Show that the function
\[ f(x) = \begin{cases} \frac{e^x}{x} & \text{if } x \neq 0 \\ 1 & \text{if } x = 0 \end{cases} \]
is not differentiable at the origin.

For the function \( f(x) = e^x \cdot \sin x \),
\[ f'(x) = e^x \cdot \sin x + e^x \cdot \cos x \]
and
\[ f''(x) = e^x \cdot \sin x + e^x \cdot \cos x + e^x \cdot \cos x = e^x \cdot \sin x + e^x \cdot \cos x = e^x - e^x \cdot \cos x \]
for all \( x \in \mathbb{R} \).

Show that the function is defined by
\[ f(x) = \begin{cases} \frac{1}{x} & \text{if } x \neq 0 \\ 0 & \text{if } x = 0 \end{cases} \]
is continuous at \( x = 0 \).

Let \( f(x) = e^x \cdot \sin x \).
\[ f'(x) = e^x \cdot \sin x + e^x \cdot \cos x \]
and
\[ f''(x) = e^x \cdot \sin x + e^x \cdot \cos x + e^x \cdot \cos x = e^x - e^x \cdot \cos x \]
for all \( x \in \mathbb{R} \).

Problem 3:

Find the volume of the largest rectangular parallelepiped that can be inscribed in the ellipsoid
\[ \frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1. \]

Examine for extreme values.

Problem 4:

Show that the function
\[ f(x) = \begin{cases} \frac{1}{x} & \text{if } x \neq 0 \\ 0 & \text{if } x = 0 \end{cases} \]
is continuous at \( x = 0 \).

Let \( f(x) = e^x \cdot \sin x \).
\[ f'(x) = e^x \cdot \sin x + e^x \cdot \cos x \]
and
\[ f''(x) = e^x \cdot \sin x + e^x \cdot \cos x + e^x \cdot \cos x = e^x - e^x \cdot \cos x \]
for all \( x \in \mathbb{R} \).

Problem 5:

Expand \( x^3 - 3x + 2 \) about the point \((1, 1)\) up to the third degree.

Prove that \( \frac{\partial^2}{\partial x^2} = \frac{\partial^2}{\partial x^2} \).

Let \( f(x) = e^x \cdot \sin x \) be defined by
\[ f(x) = \begin{cases} \frac{1}{x} & \text{if } x \neq 0 \\ 0 & \text{if } x = 0 \end{cases} \]
is continuous at \( x = 0 \).

Let \( f(x) = e^x \cdot \sin x \).
\[ f'(x) = e^x \cdot \sin x + e^x \cdot \cos x \]
and
\[ f''(x) = e^x \cdot \sin x + e^x \cdot \cos x + e^x \cdot \cos x = e^x - e^x \cdot \cos x \]
for all \( x \in \mathbb{R} \).
Partial Differential Equations

Paper-BM-232

Mathematics

GSM / D-17

Printed Pages: 3

Roll No.
\[ z = (z - 1) + \varepsilon s \]

Solve \( z = (z - 1) + \varepsilon s \) using Charpit's method.

Find the complete integral of the equation.

\[ z = \mu + \varepsilon s \]

Solve \( z = \mu + \varepsilon s \) and \( d + 1 = \varepsilon \).

Find the complete integral of the equation.

\[ \psi (x, y, z) = \mu + \varepsilon s + \varepsilon x \]

Solve \( \psi (x, y, z) = \mu + \varepsilon s + \varepsilon x \) and \( d + 1 = \varepsilon \).

Find the complete integral of the equation.
Simultaneously, the resolution is same as if would be if the forces were body. If O be turned to $\frac{D}{p}$ show that the line of action

9. Two like parallel forces P and Q act at given points of a

either of the forces represented by $AD$ and $AV$ respectively.

Show that the components along $AB$ and $AC$ are:

$$\frac{q}{p}$$

Of O, is the incentre.

9. O is the point in plane of triangle ABC, O meeting BE in D.

Unit-1

Dimension reduces to a single force.

1. Write the condition when the system of forces in three

2. Define coefficient of friction.

3. What is the geometrical representation of moment? -

4. Where AC = 3 cm, find the magnitude of the forces.

5. The resultant of two like parallel forces P and Q acting at

Compulsory Question

Each unit 2 questions 1, is compulsory.

Note: Attempt the questions in all sections from least one from

Maximum marks: 27

Time allowed: 3 hours

STATICS

Paper-BM-233

MATHEMATICS

CGM / D-17

914

4

Roll No.

2% 1 = \frac{N}{X^2 - X^3} = \frac{M}{Z^2 - X^3} = \frac{T}{X^2 - Z^3}

8% 2. Find the resultant wrench of two given forces $R_1$ and $R_2$

1. Force is $\sqrt{z^2 + \frac{z}{x} + \frac{z}{y}}$
about these axes, prove that the magnitude of the single
force is equal to the sum of the components of force in the
vertical plane. The direction of the force is in the
vertical plane, and it makes an angle with the horizontal
plane. The force is the resultant of two components:
the force in the vertical plane and the force in the
horizontal plane.

8. (a) A particle is at rest on the inner surface of a sphere of
radius R. The particle is acted upon by a force F.

(b) The distance of the particle from the vertical
diameter of the sphere is 2:3:10.

9. (a) A particle is at rest on the inner surface of a sphere of
radius R. The particle is acted upon by a force F.

(b) The distance of the particle from the vertical
diameter of the sphere is 2:3:10.

2. (a) A particle is at rest on the inner surface of a sphere of
radius R. The particle is acted upon by a force F.

(b) The distance of the particle from the vertical
diameter of the sphere is 2:3:10.
1. **Short Answer Questions.**

- There are 16 marks here.
- Attempt five questions in all, selecting at least one question from each unit. Question No. 1 is compulsory.

Maximum marks : 80

**Western Political Thinkers - I**

**PAPER I - OPT (I)**

**POLITICAL SCIENCE**

Exam Code: 921

Page 17

Prime Pages : 3

Roll No:** **...
Unit III (II) (ii)

5. Macmillan was primarily a realism Discuss...


Unit II (I) (ii)

4. Critically examine Si Augustinus Theory of State and


2. Critically discuss the Plato's theory of justice.

1. Explain Rousseau's theory of General Will.

8. Examine Bentham's views on State.


16

(3)
Unit II

1. Write the full description of Debussy's final work. Durang
2. Write the notation of a Dirn Khyal in Raga Gand Sarang.
3. Write in detail about Raga Chhaya
4. Write the full description of Debussy's final work. Durang
5. Write the essay on the following musical terms:

Unit II (09-19)

- Debussy
- Raga
- Khyal
- Gand Sarang
- Chhaya

Note: The candidates will be required to attempt the questions in all sections at least one question from each unit. All questions will carry equal marks.

Time allowed: 3 hours

Maximum marks: 40

Paper I

MUSIC (VOCAL) (THEORY)

GSM/D-17

Printed Pages: 2

ROLL NO.

923
Establish the following inequality using Langrange’s mean value theorem:

\[ \frac{(x+1) - x}{x} > (x+1) \log \frac{x+1}{x} \]

Examine the applicability of Rolle’s theorem for the function

Examine the extreme values for the function

Find the equation of normal to the surface at the point

Prove that \( z = 0 \) if \( z = \log \frac{e^x - e^{-x}}{2} \)

Test the limit.
Find the volume of a right circular cylinder.

\[ V = \pi r^2 h \]

where \( h, r \) are such that \( h = r^2 \).

\[ V = \frac{1}{2} \pi (r^2)^2 + r \]

Therefore, the volume is \( V = \frac{1}{2} \pi r^4 + r \).

For a spherical sphere, prove that

\[ V = \frac{4}{3} \pi r^3 \]

where \( r \) is the radius.

\[ V = \frac{4}{3} \pi r^3 \]

Therefore, the volume of a sphere is \( V = \frac{4}{3} \pi r^3 \).

Express the curve \( t = \cos \theta + e^t \) as a function of \( t \) and \( \theta \) are both \( f \) and \( g \) are differentiable at a point \( (a, b) \) of the domain.

Therefore, \( f \) and \( g \) are differentiable at \( (a, b) \).

II

III

Evaluate \( \lim_{x \to 0} \frac{x}{x^2 + 1} \)

\[ \lim_{x \to 0} \frac{x}{x^2 + 1} = 0 \]

Therefore, the limit is 0.
\[
\left( \frac{Z}{z^2} \right)_x = 0
\]

2. (a) Form the partial differential equation by eliminating

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

(b) Find whether the following partial differential equation is

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

(c) Classify the following differential equation:

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

(d) Write two simultaneous wave and Laplace equation.

1. (a) Solve \( \nabla^2 z = 0 \) for all values of \( \lambda \).

2. (a) Find the differential equations of the set of all right circular

All questions carry equal marks.

Note: Attempt five questions in all sections at least one

Maximum marks: 80

Time allowed: 3 hours

PAPER-BM-232

PARTIAL DIFFERENTIAL EQUATION

GSM / D-17
1. \[ 0 = \left( \frac{k_e}{\eta_z} \right) \tan \left( \frac{v}{x} \right) \] and
\[ n = (0, 1) \] n
satisfying the conditions
\[ n = \left( \frac{k_e}{\eta_z} \right) \tan \left( \frac{v}{x} \right) \] n
\[ \tan \left( \frac{v}{x} \right) \]
\[ 0 = \left( \frac{k_e}{\eta_z} \right) \tan \left( \frac{v}{x} \right) \] n
satisfying the conditions
\[ \frac{x}{y} \] n = \( (0, 1) \) n
\[ \tan \left( \frac{v}{x} \right) \]
---

**Problem 1**

1. Solve: \[ 1 = \varepsilon \] \( \beta \)
2. Solve: \[ (\varepsilon + \chi \cos \phi \varepsilon, \chi \sin \phi \varepsilon) = z \left( (1 + \varepsilon, \chi, z, z, z, z) \right) \]
3. Solve: \[ \chi \sin \varepsilon = \chi \sin \varepsilon \]
4. Solve: \[ \chi \sin \varepsilon = \chi \sin \varepsilon \]
5. Solve: \[ \chi \sin \varepsilon = \chi \sin \varepsilon \]
6. (a) Classify and reduce the equation to canonical form
7. **Problem 2**

1. Prove that the function is a solution to the equation
2. Find the complete integral of the equation
3. Solve the equation
4. Solve the equation
5. Solve the equation
6. Solve the equation
7. Solve the equation
8. Solve the equation
2. (a) Prove that two coplanar couples of equal and opposite
moments balance each other.

(b) Also find the point D in which the line of action of the force BC meets the side AD of \( \triangle ABC \).

(c) Find the magnitudes and directions of the forces AB and CD if \( \square ABCD \) is an equilateral triangle.

(d) Find the point of concurrency of the forces.

(e) A transversal with the lines of action of three concurrent forces, each with \( \vec{o} \) is perpendicular. Find its inclination with the force. Also find the other.

3. The resolved part of force \( \vec{F} \) in a direction is \( \vec{F} = \frac{2}{3} \vec{F} \).

(a) If \( \vec{F} \) and \( \vec{R} \) each be 120°. Prove that \( \vec{p} = \vec{R} \).

(b) Three forces \( \vec{F} \) and \( \vec{R} \) act on a particle and keep it in equilibrium. If the angle between the forces \( \vec{F} \) and \( \vec{R} \) is \( 120° \), displace through a distance \( \vec{G} \) is combined with them. Show that their resultant is parallel forces. A couple of moment.

Note: Attempt five questions in all selecting one question from each unit. Time allowed: 3 hours.
To find the least force to drive a heavy body on a rough

2. Find the centre of gravity of a uniform rectangular

(Comprehension Question)

Unit-IV

8. A heavy uniform rod rests with one end against a smooth vertical

\[ \begin{align*}
\text{system of forces} & \quad \begin{cases}
\text{x, y, z} & \quad L \text{. N.}
\text{forces} & \quad \begin{cases}
x \text{and } y & \quad L, M, N
\end{cases}
\end{cases}
\end{align*} \]

9. If the null point of the plane \( x + y + z = 1 \) is \( P \),

central axes from their lines of action are \( O \).
are perpendicular. Show that the ratio of distance of the

(8)

Unit-V

7. If \( \alpha, \beta, \gamma \) are two non-intersecting forces whose directions

\[ \begin{align*}
\tan \alpha + \tan \beta + \tan \gamma &= 0
\end{align*} \]

8. Show that if \( \alpha, \beta, \gamma \) are two non-intersecting forces whose directions

\[ \begin{align*}
\tan \alpha + \tan \beta + \tan \gamma &= 0
\end{align*} \]

9. Show that if \( \alpha, \beta, \gamma \) are two non-intersecting forces whose directions

\[ \begin{align*}
\tan \alpha + \tan \beta + \tan \gamma &= 0
\end{align*} \]

Unit-VI

7. \( \lambda = \zeta (\lambda - \xi) \) \[ z (1 - \lambda) + \xi \lambda \]

surface

around the axis of \( Y \), the central axes of the forces generate the

A force \( F \) acts along the axes of \( x \) and a force of equal magnitude

\[ \begin{align*}
\text{A force } F & \quad \text{acts along the axes of } x \text{ and a force of equal magnitude}
\end{align*} \]

Unit-III

7. \( \lambda = \zeta (\lambda - \xi) \) \[ z (1 - \lambda) + \xi \lambda \]

surface

around the axis of \( Y \), the central axes of the forces generate the

A force \( F \) acts along the axes of \( x \) and a force of equal magnitude

\[ \begin{align*}
\text{A force } F & \quad \text{acts along the axes of } x \text{ and a force of equal magnitude}
\end{align*} \]

Unit-I

7. \( \lambda = \zeta (\lambda - \xi) \) \[ z (1 - \lambda) + \xi \lambda \]

surface

around the axis of \( Y \), the central axes of the forces generate the

A force \( F \) acts along the axes of \( x \) and a force of equal magnitude

\[ \begin{align*}
\text{A force } F & \quad \text{acts along the axes of } x \text{ and a force of equal magnitude}
\end{align*} \]

Unit-II

7. \( \lambda = \zeta (\lambda - \xi) \) \[ z (1 - \lambda) + \xi \lambda \]

surface

around the axis of \( Y \), the central axes of the forces generate the

A force \( F \) acts along the axes of \( x \) and a force of equal magnitude

\[ \begin{align*}
\text{A force } F & \quad \text{acts along the axes of } x \text{ and a force of equal magnitude}
\end{align*} \]
8. Explain different components of the computer using the block diagram.
4. Example: Explain the use of GOTO statement with the help of an example.
4. She and explain sub-routine and function subroutines.

Unit-1

2. "Of water at Shimla (H.P.) is less than Kurnukshetra." (a) Write the formula that explains the boiling point.
(b) Show that the formula is correct and prove it using the concept of energy.
(c) Program organization.
(d) What are valid characters used in FORTRAN also discuss.

1. Convert the decimal number 116.525 to binary number.

Computer Programming and Thermodynamics

Paper - PH-301-A

Physics

Maximum marks: 40

Time allowed: 3 hours

Name

Attempt the questions in all sections, selecting at least one from each unit.

Note: For each unit, choose one question from the following topics:

- Logic gates
- Boolean algebra
- Number systems
- Computer architecture
- Assembly language programming
- Numerical methods
- Thermodynamics

Printed Pages: 3

Roll No.:
Maxwell's thermodynamic relations.

Define the four thermodynamic functions and hence derive
change in volume is 0.0077 cc.

Ice by 0.008°C and when one gram of ice melts, the
pressure of 1 atmosphere changes the melting point of
(b) Calculate the latent heat of ice, given that change of
(3)
1. Explain why the central fringe is black. Find the expression for fringe width.

2. Discuss the formation of fringes by Lloyd's mirror and prove that in case of interference, dark and bright bands are of equal width.

Unit I

(a) What is the condition of dosent species in a grating?

(b) Define Fresnel's half period zones.

(c) Why the central fringe is formed in transmittal system?

(d) Why the central fringe is formed in reflectance system?

(e) Calculate the wavelength of light used.

(f) What is the wavelength of 0.0589 mm. Calculate the wavelength of light used.

(g) When the movable mirror is moved through 2°, what happens to the fringes observed in a diffraction pattern of a grating of 1800 lines per centimeter. Are two adjacent lamp discs close to each other?

(h) Can a sustained interference pattern be obtained with

Compulsory Questions

carry equal marks

each unit. Question No. 1 is compulsory. All questions

Note: Attempt five questions in all, selecting one question from each unit.

Maximum marks: 70

Time allowed: 3 hours

Waves and Optics

Paper - VI

Physics

GSM-17

Printed Pages: 3

Roll No.
What is the nature of diffraction pattern due to slit produced by a circular aperture analytically?

Discuss the formation of Fresnel's diffraction patterns at a distance of 2 cm. Place which focus a parallel beam of wavelength 5000 Å, calculate the radii of three transmural zones of a zone focal plane. Explain the transverse plane has multiple

The expression of phase within

Explain the interference by wedge shaped thin film and find

Determine the expression for the diameter of bright fringes in 3 The transmition and reflection patterns are complimentary

How can X-Y section's interference be useful for the

Describe the fringe's mean of reflection

Transmission sheet?
Describe the structure of Ni (CO)₄.

2. Why are transition metals less reactive than s-block metals?

Section A

(a) Why is d-fluorine insoluble in liquid but insoluble in water?

(b) Ru is one of the... metal.

(c) Write a complex ion of Fe (II).

(d) Give an example of a protic solvent and of an aprotic solvent.

(e) What is a Ziegler-Natta catalyst?

(f) Name the 3d series element which is not included in the transition elements.

(g) Name a transition metal which is liquid at room temperature.

(h) What is a chelate? Give an example.

Note: Attempt five questions in all, selecting at least two questions from each section. Question No. 1 is compulsory.


(a) Dissolve in strong polar solvents.
(b) Explain with examples that non-polar compounds are unstable.
(c) Solution. Discuss solubility equations.

9. NH₃ solution. Discuss solubility equations.

(iii) In aqueous solution, Na hydroxide H₂O is stable in solution.

(i) Why SO₂ is a better solvent for organic compounds?

(iv) Define the term non-aqueous solvent with two examples.

2. Why Cr²⁺ is a better solvent than Cr³⁺ for organic compounds?

With the help of VB, explain the geometry and magnetic behavior of 

2. When is effective Avogadro number and FUND rule. Give one 

[Co(edta)]²⁺

Also, 

1. Draw the structure of 

Discuss the structure of Schiff's base according to Valence Bond Theory. 

(iii) Discuss Structure of [Cr(NH₃)₆]³⁺.

1%. 

1%. 

Square Plane complexes do not exhibit optical isomerism.

(1) 

(c) 

[Co(NH₃)₆]²⁺

H₂O

Fe

Fe

H₂O

2. Explain the trend of variation of atomic radius in Fe transition 

1. Which will have higher valence of electron configuration? Explain.

2. Which will have higher ionization energy? Explain.

3. Which of the following is more paramagnetic and why?

3. (i) Cu

(ii) Cu²⁺

(iii) Cu⁴⁺

(iv) Cu⁶⁺

2. Describe the structure of Cr and Fe.

3. (i) Describe the irregular electronic configurations of Cr and Fe.

(2) 

6. (i) While IUPAC name of the following:

Section B

2. Strongly oxidizing, explain the following:

(i) Explain that Cr²⁺ is strongly reducing while Mn (III) is

2. How will you account for the following:

2. Explain the trends of variation of atomic radius in Fe transition.

1. Which will have higher ionization energy? Explain.

2. Which will have higher ionization energy? Explain.

3. Explain the structure of Cr and Fe.

3. (i) Describe the irregular electronic configurations of Cr and Fe.

(2)
Physical Chemistry
Paper-IX (CH-202)

Compulsory

Only alcohols allowed

Use of Log-table and Non-Programming Calculator is allowed

Compulsory

No. 1 is a question from each section. Answer five questions in all, selecting at least two from each.

Maximum marks: 32

Time allowed: 3 hours

Physical Chemistry
Paper-IX (CH-202)

Compulsory

Only alcohols allowed

Use of Log-table and Non-Programming Calculator is allowed

Compulsory

No. 1 is a question from each section. Answer five questions in all, selecting at least two from each.

Maximum marks: 32

Time allowed: 3 hours

Physical Chemistry
Paper-IX (CH-202)

Compulsory

Only alcohols allowed

Use of Log-table and Non-Programming Calculator is allowed

Compulsory

No. 1 is a question from each section. Answer five questions in all, selecting at least two from each.

Maximum marks: 32

Time allowed: 3 hours

Physical Chemistry
Paper-IX (CH-202)

Compulsory

Only alcohols allowed

Use of Log-table and Non-Programming Calculator is allowed

Compulsory

No. 1 is a question from each section. Answer five questions in all, selecting at least two from each.

Maximum marks: 32

Time allowed: 3 hours
Section B

(3)

Section A

(2)

1. What is the main difference between an Open, Closed, Ideal Gas in Russell and isotermal expansion of one mole of an Ideal Gas?

2. Calculate the maximum work done by the system during 2/4


4. When is the physical significance of entropy? A process is carried out under reversible conditions. Show that for reversible and adiabatic expansion of an ideal gas, \(PdV = -dW\) is a constant. Devise an expression for the work done in a reversible and irreversible process using the example.

Under what condition an extensive property may become intensive property? Give an example.

Where the symbols have their usual meanings.

\(C_P - C_V = \Delta F\)

5. Calculate the value of equilibrium constant \(K\) for the reaction:

\[ 2NO_2 (g) \rightleftharpoons 2NO (g) + O_2 (g) \]

Describing the use of distribution law in determining the equilibrium constant of the following chemical reactions:

6. Define Van't Hoff equation in the integrated form:

7. Define Nernst distribution law using the concept of chemical potential.

8. Devise Clausius-Clapeyron equation in the integrated form.


10. Can we find the distribution coefficient of iodine between water and ethanol? Why or why not?

11. With the help of an example, show that for reversible and adiabatic expansion of an ideal gas, the law (p) is applicable.

12. Define equilibrium law of chemical equilibrium. How can it be predicted?
Turn over

(ii) Explain the mechanism of trans-estimation of ethanal from ethanal.

2. (a) Explain the reaction of ethanol with mechanism.

Section 2

1. Phosphorus is oxidized to pentoxide by hydriodic acid. Explain.

(ii) Ethylene oxide is a stable with phenylmethane.

1. Phosphorus is oxidized to pentoxide with conc. H2SO4. Explain.

(d) What happens when:

2. What is trans-esterification? Explain with an example.

2. Why phenol is acidic in nature? Explain and why.

1. (a) Which geometrical isomer of substituted alcohols are at higher wave

Compulsory Question

Each section Question No. 1 is compulsory.

Note: Attempt five questions in all. Selecting at least two from

Maximum marks: 32

Time allowed: 2 hours

Organic Chemistry

Paper-X-CH-203

CHEMISTRY

GSM / D-17

946

Primed Pages: 3

ROLL NO.
A(,

Acetic acid into acetic anhydride.

Acetic acid into ethylene

Choose one following conversions:

(c) E. Butadiene

(i) Acetophenone

(a) Crotonaldehyde

(b) Name the type of electronic transition in following compound:

\[ \begin{align*}
\text{CH}_2=CH-CH=CH_2
\end{align*} \]

(c) Calculate \( \lambda_{\max} \) for following compound:

1. Define a bathochromic shift.

2. Explain with an example of conjugation on \( \lambda_{\max} \).

3. Explain various types of electronic transitions in the region.

4. It absorbs at 264.5 nm. Explain.

(c) Acetic acid absorbs at 279 nm in \( \pi \)-conjugated whereas in water.

2. Why acetic anhydride is weakly basic in nature?

(c) Ethylene

(i) Carbon dioxide

(a) How acetic acid can be prepared using:

3. Increasing order of solubility and give reasons.

4. Arrange acid halides, ester anhydride and amides in

\[ \begin{align*}
\text{CH}_3\text{COCl},&\quad \text{CH}_2\text{O},&\quad \text{CH}_2\text{COCl},&\quad \text{CH}_3\text{COOCH}_3
\end{align*} \]

(d) (a) Explain why an alkene is more acidic and why?

5. Give the mechanism of base catalysed ring opening of

\[ \begin{align*}
\text{HO}_2^- &\quad \text{CH}_3\text{COO}^- + \text{H}_2\text{O} \\
\text{HO}_2^- + \text{H}_2\text{O} &\quad \text{CH}_3\text{COO}_2^- + \text{H}_3\text{O}^+
\end{align*} \]

6. (a) Outline following reaction:

Section B

(c) Explain Kolbe's reaction with mechanisms.

(i) n-Nitrophenol

(b) Which one is more acidic and why?

2. Epoxide

(a) Give the mechanism of base catalysed ring opening of

\[ \begin{align*}
\text{HO}_2^- &\quad \text{CH}_3\text{COO}^- + \text{H}_2\text{O} \\
\text{HO}_2^- + \text{H}_2\text{O} &\quad \text{CH}_3\text{COO}_2^- + \text{H}_3\text{O}^+
\end{align*} \]

4. (a) Discuss with mechanism oxidative cleavage of enol

2. Give reasons.

(c) Compare the electronic character of 1,2- and 3- diols.

2. Discuss the mechanism of Claisen rearrangement.

3. (a) Discuss the mechanism of Claisen rearrangement.

2. (a) 46
1. (a) Explain the structure and function of epidermal tissues.
   (b) Describe the importance of secondary growth in plants.

2. Write short notes on:
   (a) Vascular bundles
   (b) Vascular tissues in leaves
   (c) Vascular tissues in stems

3. Write short notes on:
   (a) Inner bark
   (b) External bark

4. Write short notes on:
   (a) Meristematic tissues
   (b) Non-vascular tissues

5. Write short notes on:
   (a) Vascular tissues in roots
   (b) Vascular tissues in stems

6. Write short notes on:
   (a) Vascular tissues in leaves
   (b) Vascular tissues in flowers

7. Write short notes on:
   (a) Vascular tissues in roots
   (b) Vascular tissues in stems

8. Write short notes on:
   (a) Vascular tissues in leaves
   (b) Vascular tissues in flowers
Section-A

1. Explain the term "system of tagia.

2. Give an account of the metamorphosis of annelids.

3. Give an account of the metamorphosis of arthropods.

4. Fresh migration.

5. Why do bees have a dual system of fat storage?

6. Describe the salivary duct system of vertebrates.

7. Describe the lymphatic system of vertebrates.

8. Describe the respiratory system of vertebrates.

9. Describe the reproductive system of vertebrates.

10. Describe the digestive system of vertebrates.

Section-B

1. Answer the following in about 20-30 words each:

   (a) Test of Hermodia
   (b) Endosyph of Amphiphery
   (c) Various droughts of chordate origin
   (d) Examine the general characters of vertebrates
   (e) Endosyph of Hermodia
   (f) Primary gill bars
   (g) Hassecke's nephridium
   (h) Write short note on the following:

2. Write short note on the following:

   (i) Primary eye
   (j) Physosomus
   (k) Intestinal bulb
   (l) Buccal funnel
   (m) Solenocytes
   (n) Anodendrons migration
   (o) Vellum
   (p) Vindosomus
   (q) Dorsal opercula
   (r) Renodermisse metamorphosis

Note: Attempt five questions in all, selecting two questions from Section-A and two from Section-B.

Time allowed: 3 hours
Discuss function of carbohydrates.

(a) Explain in detail structure of bone.

(b) Give an account of oxygen delph.

(c) Describe mechanism of muscle contraction.

(d) Discuss absorption of proteins.

(e) Describe various types of nutrition and feeding in mammals.

(f) Explain role of vitamins.

(g) Discuss digestion carbohydredes in human beings.

Section-B

(h) Explain photosynthesis.

(i) Give a detailed account of induced fit theory.

(j) Explain photosynthesis.

(k) Discuss structure and role of fatty acids.

(l) Write a note on buffers.

(m) Describe mechanism of enzymes.
Expression for the cut-off frequency: 

\[ f_c = \frac{1}{2\pi RC} \]

9. Explain the operation of OPAMP as an integrator.

5. Explain the operation of active filters. Explain the operation of

configured OPAMP in an inverter and non-inverter configuration for the input offset voltage and input offset voltage in an OPAMP. Find the

Unit-IV

8. Explain the input offset voltage in an OPAMP. Find the

\[ V_{os} = \frac{\Delta V}{A} \]

where \( A \) and \( R \) are the

(a) Design an inverting amplifier using OPAMP for an output

4. Draw an inverting amplifier using OPAMP as a differential amplifier and derive an expression for the differential voltage gain.

6. Draw and explain the circuit of an emitter coupled differential

Unit-III

4. Describe a saturation transistor.

(b) (c) (d) (e) (f) (g) (h) (i) (j) (k) (l) (m) (n) (o) (p) (q) (r) (s) (t) (u) (v) (w) (x) (y) (z)

5. (a) How IC diodes are fabricated? Sketch the cross-section

4. (a) How IC diodes are fabricated? Sketch the cross-section

Unit-II

2. Explain the fabrication of the following in an integrated circuit:

4. Photolithography

2. Where is the following processes used in IC fabrication?

3. Explain the various steps involved in fabricating a monolithic integrated circuit.

2. Discuss the various steps involved in fabricating a

Unit-I

4. Explain the operation of OPAMP as an integrator.

2. Explain the operation of active filters. Explain the operation of

configured OPAMP in an inverter and non-inverter configuration for the input offset voltage and input offset voltage in an OPAMP. Find the

\[ V_{os} = \frac{\Delta V}{A} \]

where \( A \) and \( R \) are the

(a) Design an inverting amplifier using OPAMP for an output

4. Draw an inverting amplifier using OPAMP as a differential amplifier and derive an expression for the differential voltage gain.

6. Draw and explain the circuit of an emitter coupled differential

Unit-III

4. Describe a saturation transistor.

(b) (c) (d) (e) (f) (g) (h) (i) (j) (k) (l) (m) (n) (o) (p) (q) (r) (s) (t) (u) (v) (w) (x) (y) (z)

5. (a) How IC diodes are fabricated? Sketch the cross-section

4. (a) How IC diodes are fabricated? Sketch the cross-section

Unit-II

2. Explain the fabrication of the following in an integrated circuit:

4. Photolithography

2. Where is the following processes used in IC fabrication?

3. Explain the various steps involved in fabricating a monolithic integrated circuit.

2. Discuss the various steps involved in fabricating a

Unit-I

4. Explain the operation of OPAMP as an integrator.

2. Explain the operation of active filters. Explain the operation of

configured OPAMP in an inverter and non-inverter configuration for the input offset voltage and input offset voltage in an OPAMP. Find the

\[ V_{os} = \frac{\Delta V}{A} \]

where \( A \) and \( R \) are the

(a) Design an inverting amplifier using OPAMP for an output

4. Draw an inverting amplifier using OPAMP as a differential amplifier and derive an expression for the differential voltage gain.

6. Draw and explain the circuit of an emitter coupled differential

Unit-III

4. Describe a saturation transistor.

(b) (c) (d) (e) (f) (g) (h) (i) (j) (k) (l) (m) (n) (o) (p) (q) (r) (s) (t) (u) (v) (w) (x) (y) (z)

5. (a) How IC diodes are fabricated? Sketch the cross-section

4. (a) How IC diodes are fabricated? Sketch the cross-section

Unit-II

2. Explain the fabrication of the following in an integrated circuit:

4. Photolithography

2. Where is the following processes used in IC fabrication?

3. Explain the various steps involved in fabricating a monolithic integrated circuit.

2. Discuss the various steps involved in fabricating a

Unit-I

4. Explain the operation of OPAMP as an integrator.

2. Explain the operation of active filters. Explain the operation of

configured OPAMP in an inverter and non-inverter configuration for the input offset voltage and input offset voltage in an OPAMP. Find the

\[ V_{os} = \frac{\Delta V}{A} \]

where \( A \) and \( R \) are the

(a) Design an inverting amplifier using OPAMP for an output

4. Draw an inverting amplifier using OPAMP as a differential amplifier and derive an expression for the differential voltage gain.

6. Draw and explain the circuit of an emitter coupled differential

Unit-III

4. Describe a saturation transistor.

(b) (c) (d) (e) (f) (g) (h) (i) (j) (k) (l) (m) (n) (o) (p) (q) (r) (s) (t) (u) (v) (w) (x) (y) (z)

5. (a) How IC diodes are fabricated? Sketch the cross-section

4. (a) How IC diodes are fabricated? Sketch the cross-section
UNIT I-A

4. Design a circuit using a counter to generate the following
   T-1 flip-flops.
   T-2 flip-flops.
   T-3 flip-flops.
   T-4 flip-flops.

4. Discuss the design principle of a digital clock.

4. Design the working of a decade counter with the help of
   logic diagram.

UNIT I-B

4. Realize a full adder using two half adders.

4. (a) Explain the difference between RS latch and RS flip-flop.

4. Draw the circuit diagram for asynchronous RS flip-flop using
   NAND gates and discuss its operation.

4. (a) Draw circit diagram for inverter RS flip-flop. Also explain the
   race around problem.

UNIT III

3. What is a demultiplexer and how does it differ from a
   decoder?

5. Explain to implement 16:1 MUX with two 8:1 MUX(s).

5. (a) Explain to design 4-to-16 line decoder.

5. (b) Explain why a decoder is a demultiplexer.

UNIT II

4. (a) Design a full subtractor circuit two 8-bit MUX.

4. Draw and explain a four bit BCD adder.

4. (a) Draw the circuit diagram of a four bit BCD adder.

4. Draw and explain a binary half adder.

4. (a) Design a full adder using NOR gates only.

4. (b) Design the design of a 4-bit parallel binary adder.

4. (a) Design a four bit BCD adder.

COMPUTER QUESTION

With Question No. 1 is compulsory.

Note: Attempt five questions in all, selecting one from each.

Maximum marks: 40

Time allowed: 3 hours

DIGITAL ELECTRONICS-I

PAPER-II

ELECTRONICS

GSM / D-17

Printed Pages: 2
COMPUTER SCIENCE

Paper-I

Data Structure

Unit-I

1. Attempt any five questions. Select one from each unit.
2. Define Data Type and Data Structure. Write categories of Data Structure.
3. What is Time and Space Complexity? Give example.
4. Write an Algorithm to Insert an element in Array.
5. Discuss Sparse Matrix and Parallel Array.
6. Define full-binary tree.
7. Write formula for searching an element in Row-Major 2-D Array.
8. Name two applications of stack.
9. Name two pattern matching algorithms.

Unit-II

10. Write any 4 string operations.
11. Define Algorithm to Insert Kth element in Array.
12. Discuss Graph and Types of Graph.
13. Define Graph and Types of Graph.
14. Discuss any pattern matching algorithm.

Unit-III

15. Discuss Garbage Collection.
16. Define LIFO, Discuss PUSH and POP Algorithm for stack.
17. Differentiate stack and queue. Write an algorithm for deletion in simple queue.
18. Discuss concept of Polish notation as application of stack.

Unit-IV

19. Differentiate tree, binary tree and discuss two algorithms for traversing a tree.
20. Define tree, binary tree and discuss two algorithms for traversing a tree.

Note: Maximum marks: B.Sc. = 40

Time allowed: 3 hours

Question No. 1 is compulsory. All questions carry equal marks.

END in S.L.
Discuss

What is the spiral model of software development?

For software crisis:

What is software crisis? Discuss the factors responsible.

What is the role of experts in software development?

What do you understand by software metrics? Write a

Unit-I

1. What are the different uses of cyclomatic complexity?

2. What types of bugs are detected during integration testing?

3. What is good planning risk?

4. What is system component? Discuss six attributes in an example.

5. What are the quality attributes of software?

Note: Attempt five questions in all, selecting one question from each unit. Question No. 1 is compulsory. All questions carry equal marks.

Maximum marks: 100. Sec: 40

Time allowed: 3 hours

Software Engineering

Paper-II

Computer Science

GSM / D-I7

Printed Pages: 3

Roll No.
Unit I-V

8. What is the difference between statement coverage, branch coverage, and path coverage criteria of testing? Why is it considered as an umbrella assurance? Why is it considered by software quality engineers in a single diagram? For comparison of different estimation, what are COCOMO and DISCREE.

What are the different approaches to software cost and estimation? For what type of projects is it suitable?

What is the difference between these three? Discuss any suitable example.

Unit II

9. (a) Unit testing and integration testing
    (c) Verification and validation
    (e) Adaptable and prospective maintenance

What is the relationship between these three? Discuss any suitable example.

(5) Draw a structured chart for the problem to find the product of two matrices. Analytically the number of multiplication steps.
Paper-1

COMPUTER APPLICATIONS

CSE/D-17

Practical: 2

Answer the following questions in all the sections of at least one question:

Maximum marks: 40

Time allowed: 3 hours

Web Designing Fundamentals

1. Explain various design methodologies.
2. Explain various points while planning a website.
3. Explain Search Engine & their tools.
4. Explain different searching techniques.
5. Write short note on Hyper text transfer protocol.
6. Give features of various browsers available in market.
7. How can you format a webpage? Explain with example.
8. Explain various kinds of links of HTML.
9. Explain the basic structure of HTML document.
10. Explain various steps to develop your website.

I. Compulsory Question:

1. Explain the <FRAMESET> tag.
2. Differentiate between ordered list & unordered list.
3. Explain briefly various features of HTML.
4. Define Web Hosting.
5. What is Webpage?
6. What is an ISP & Name any four ISPs.

II. Unit-II

3. Write short note on Hyper text transfer protocol.
4. Explain different searching techniques.
5. Explain various points while planning a website.
6. Explain various design methodologies.

III. Unit-III

9. Explain the basic structure of HTML document.
10. Explain various steps to develop your website.

IV. Unit-IV

2. Explain the <FRAMESET> tag.
3. Differentiate between ordered list & unordered list.
4. Explain briefly various features of HTML.
5. Define Web Hosting.
6. What is Webpage?
7. What is an ISP & Name any four ISPs.
Unit I
8
2. What are the advantages of DBMS?
3. What are the components of DBMS?

Unit II
8
4. What are the different levels of abstraction of data in DBMS?
5. What is data independence?
8

Unit III
8
9. What is RDBMS?
8
10. Explain ER Diagram.
8
11. Illustrate Physical data Model with example.

Note: (a) Answer one question from each unit
(b) Question No. 1 is compulsory.
(c) All questions carry same marks.

Maximum marks: 40

Time allowed: 3 hours

Data Base Management System
Computer Applications

GSM / D-I7
(d) Explain the functions of different classes of antibodies.
(c) Flowchart of alternative pathway of complement system
(b) Immunological tolerance
(a) Structure of class II MHC molecules.

7. Write short notes on the following:
   2. Discussion on recognition receptors in detail.
   4. Why is hypersensitivity different from anaphylaxis?
   8. Account of cells involved and write down its function.
   8. Discuss in detail about the cell mediated immunity giving an

Unit-II

(9) ELISA and RIA
(8) Precipitation and agglutination reactions
(7) Difference between the following:
   (6) How antibodies are produced?
   (5) Factors affecting antibodies?
(4) (a) Write short notes on the following:

(2)
2. Describe the Haemolytic and choose experiment showing the

Unit-I
on their N-terminal end
All protein and chlorophyll proteins have N-terminal
promoter site in DNA.

(i) RNA polymerase binds at operator and repressor binds at
(ii) Amino site in RNA molecule having catalytic activity
(iii) Repression to RNA molecule is regulated by attenuation.

Oxidized repressor are found on the leading strand.
Phosphodiester linkage with chromosomal DNA.
Denatured DNA shows hyperchromatic effect.

(a) DNA transcripts carry genetic marks.

compulsory: Attempt any two questions from each unit.
Note: Attempt five questions in all question No. 1 is
Time allowed: 3 hours

Maximum marks: 40

Molecular Biology

Paper-II

BIOTECHNOLOGY

GSM / D-17

Printed Pages: 2

Roll No.
(a)

(b)

(c)

(d)

(e)

(f)

(g)

(h)

(i)

(j)

Maximum marks: 40

Time allowed: 3 hours

Prohibitory

PANJABI

CSM/D-17

Printed Pages: 3

ROLL NO.
5

6.

5

5
5. \(2 \times 4 = 8\) ने कैसे बनाये लड़ाकुड़। लड़ाकुड़ के लिए कैसे है आधार?

4. \(2 \times 2 = 8\) ने कैसे बनाये लड़ाकुड़। लड़ाकुड़ के लिए कैसे है आधार?

3. \(2 \times 4 = 8\) ने कैसे बनाये लड़ाकुड़। लड़ाकुड़ के लिए कैसे है आधार?

2. \(2 \times 2 = 8\) ने कैसे बनाये लड़ाकुड़। लड़ाकुड़ के लिए कैसे है आधार?

1. \(2 \times 2 = 8\) ने कैसे बनाये लड़ाकुड़। लड़ाकुड़ के लिए कैसे है आधार?

**Time allowed: 3 hours**

**Maximum marks: 40**

**SANSKRIT (Compulsory)**

**GM / D-17**
I. Define any eight of the following:

1. Nurturance
2. Preparation of mother
3. Breast feeding
4. Addressing
5. Meal planning
6. (a) Antenatal care
7. (b) Postnatal care
8. (c) Breast feeding

II. Write short notes on the following:

1. Give recommendations of foods and nutrients during pregnancy.
2. What are the various physiological changes taking place during old age?
Give nutritional requirements for adult woman who may
be sedentary; moderate or heavy worker.

6. Give nutritional requirements for adult woman who may

II

Unit II

Planning Give nutritional requirements also.

What are the various problems which adolescents are
facing? What points will you consider for them for diet
planning? (A)

What are the various problems which adolescents are
facing? What points will you consider for them for diet
planning? (A)

Supplementary reading.

Nutrition for infants

Packed lunch for school going children

Select any two of the following for writing short notes:

4. Moderate work (A)

5. Unemployment (A)

6. Work in the field of nutrition (A)

7. What are the various factors affecting meal planning? (A)

8. What are the various factors affecting meal planning? (A)

9. What are the various factors affecting meal planning? (A)

10. What are the various factors affecting meal planning? (A)
I. Write short notes on the following:

Compulsory Question

Note: Attempt Five questions in all, select at least two questions from each Unit. Q. No. 1 is compulsory. All questions carry equal marks.

Course 202
CONSTRUCTION
INTRODUCTION TO CLOTHING
GSM/D-17
Roll No. ....................................................
Total Pages: 04

Points to be kept in mind while cutting the fabric:
(a) Preparation of fabric for garment making

9. Write short notes on the following:
8. Explain the tools required for draping. Discuss its advantages.

7. Write the general principles of clothing construction.

6. Explain the psychological and social importance of clothing.

5. Write in detail about the care and maintenance of sewing machine.

4. Write about the following defects of sewing machine:

3. Write the parts of a sewing machine.

2. Explain the equipments used for clothing construction.

1. Explain the causes and suggest their remedies:

(a) Looph formation
(b) Missing stitch
(c) Needle breaking
(d) Upper thread breaking
1. Define family. Explain its meaning and functions.

2. What do you understand by the word 'Marriage'? Elaborate.

3. What are the various factors for changing structure of family.

Course: 1176
FAMILY DYNAMICS
GSM-D-17
Total Pages: 03

Evaluate Marks: 40

Time: 3 hours

Note: Attempt the questions in all the sections at least once.
8. While an essay on reproductive rights of women with suitable examples.

8. Explain role of NGOs (Non-Governmental Organizations) in improving child mortality.

6. Discuss the population policy of India.

5. Write down the importance of various methods of family planning and the factors affecting it.

4. How have liberalisation policies affected human development today?

3. Answer the following in short:

(a) Population Statistics
(b) Industrialisation
(c) Child Health Programmes
(d) Population Education
(e) Family Planning

3. Care of aged
4. Working women
5. Child rearing
6. Economic roles
7. Answer any five out of the following:

(a) Child health
(b) Maternal health
(c) Nutrition
(d) Immunisation
(e) Family planning

9. Questions

1. (a) Answer any four out of the following:

(a) Child health
(b) Maternal health
(c) Nutrition
(d) Immunisation
(e) Family planning

(b) What is population?

(c) Discuss the importance of family planning.

(d) Discuss the importance of family planning in India.
cooker

Instructions to be followed while using pressure cooking of commodities:

(i) How can a consumer protect himself from faulty manufacturing?
(ii) Name different household pressure equipment

Explain the following in 5 sentences each:

1. (Alternative answer)

2. (Alternative answer)

3. (Alternative answer)

4. (Alternative answer)

5. (Alternative answer)

Course Code:

CO 331

Course Title:

CONSUMER PROTECTION

HOUSHOOLD EQUIPMENT AND

Total Pages: 1177

SM/R-17

Total Marks: 1177
The performance of various consumer products may vary under different conditions. It is therefore important to describe in detail the performance of a consumer product. When choosing the correct and installation instructions, the following should be considered:

1. Performance
2. Efficiency
3. Durability
4. Safety
5. Compatibility
6. Installation
7. Maintenance
8. User friendliness
9. Environmental impact
10. Aesthetics

In addition, it is essential to consider the cost of the product and how it compares to other similar products on the market. The manufacturer's warranty should also be taken into account.

Upon purchase, the product should be properly packed and transported to the consumer. Once delivered, the product should be unpacked and checked for any damages or defects. If any issues are found, the consumer should contact the manufacturer for assistance.

The product should be used and operating instructions followed carefully. If the product fails to perform as expected, the consumer should contact the manufacturer or retailer for further assistance.

Finally, it is important to consider the product's impact on the environment and the community. Products should be designed with sustainability in mind and the manufacturer should be transparent about the product's environmental footprint.
I. Objective Type Questions (Compulsory Questions):

Note: Attempt Five questions in all selecting at least one question from each block. Q.No. 1 is compulsory. All questions carry equal marks.

Maximum Marks: 40

Time: Three Hours

Course 209
EXTENSION EDUCATION
COMMUNITY DEVELOPMENT

178

Reg.No: D-77
Total Pages: 03
Write down main objectives of Mid-Day Meal Programme.

8. What are programmes of India for poverty alleviation in rural areas?

8. Explain DAVODA (Development of Women and Children


II

Unit II

5. Write down the main elements of Social Structure.

8. What is meaning of Society? Explain various types of

8. Family

8. What do you mean by Family? Explain various types of

8. Communication in daily life?

8. What is Communication Process? What is importance of

Communication?


e -

-
1. Explain the benefits of object-oriented programming and procedural programming. Also, explain the differences between Object-Oriented Programming (OOP) and procedural programming.

2. What is Object-Oriented Programming (OOP)? Why are its benefits?
and disadvantages? Also give examples.

What is friend function? What are its advantages and disadvantages? Give suitable examples.

What are inline functions? What are its advantages and disadvantages? Give suitable examples.

Unit II

8. Explain the following functions by giving suitable examples.

Unit III

5. Explain the following function with example:

(a) Destructor

(b) Parameterized constructor

6. Explain the following with example:

(a) Self

(b) Precedion

(c) Writing

(d) Getting function

9. What are conditional operators? What are its advantages and disadvantages? Give suitable examples.

10. Divide operator

11. Size of operator

3. What is local class? What are the rules for using local class? Give example.
Example:

(b) Describe Big-O Notation, operations and applications.

Unit I

(a) When is Time-Space Trade Off

(b) Explain the concept of Garbage Collection.

(c) Explain the concept of degree.

(d) Explain the concept of degree of a node. Explain with examples.

(e) When do you mean by tree and level and degree of a node.

Compulsory Question

From each Unit in addition to compulsory Q. No. 1.

Note: Attempt Five questions in all, selecting one question

Maximum Marks: 80

BCA-232

DATA STRUCTURE

BCA-D-17

Total Pages: 03
The text on the page appears to be a list of questions related to computer science, specifically algorithms and data structures. Here is a transcription of the content:

**Unit I**

1. What do you mean by (a) queue and (b) stack algorithm?
2. Explain the concept of polynomial notation.

**Unit II**

6. The concept of stack: Explain the post-order traversal algorithm using a tree in memory.

**Unit III**

6. Write an algorithm for deleting a node in a linked list.

**Unit IV**

6. Write an algorithm to insert an element in an array with a suitable example.

The text is a collection of algorithmic problems and explanations, typical of a computer science course.
Unit I

Explain polling.

Discuss the structure of instruction format.

Discuss the bus and memory data transfer.

Discuss instruction cycle with its operations.

2. Explain various approaches of control unit design and implementation.

3. Design and explain logic circuit for memory read and write operations of a basic computer.

Note: Attempt five questions in all, selecting at least one from each unit. No. 1 is compulsory. All questions carry equal marks.

Time: Three Hours

Maximum Marks: 80

BCA 233
COMPUTER ARCHITECTURE

BCA/ D-17

Total Pages: 02
9. Explain program based data transfer techniques.

8. Explain the memory hierarchy in terms of their storage and access.

Unit IV

7. Describe RISC and CISC architecture.

6. Explain various CPU organizations.

Unit III

5. What do you mean by micro operation? Describe arithmetic logic and shift micro operations.

4. Explain Register Transfer Language (RTL) in detail.

Unit II

9. Explain program based data transfer techniques.

8. Explain the memory hierarchy in terms of their storage and access.
Explain different software engineering models with their advantages and limitations of this model.

2. (a) List the task regions in spiral model. What are the

Unix

Explain the human resources allocation model.

(iii) Explain decision table with the help of an example.

(iv) Explain technical and operational feasibility.

What do you mean by feasibility study?

What are the attributes of good software?

I. Answer the following questions in brief:

Computer Question

4x4

Maximum Marks: 80

Notes:

1. Attempt five questions in all. Q. No. 1 is compulsory.

Time: Three Hours

BCA-234

SOFTWARE ENGINEERING

BCA/D-17

Total Pages: 03

Roll No.

03
6. Explain the concept of Data Flow Diagram (DFD). Define the following DFD terms by giving their symbols: (a) Process (b) Data Store (c) Data Flow (d) External entity

Unit III

8. Discuss various methods. Explain SDQA (Software Quality Assurance) by giving the various tools and techniques of monitoring.

5. (a) Explain the difference between black box and white box testing.

(b) What do you mean by Project Monitoring? Explain.

4. (a) What is SCM (Software Configuration Management)? Describe the process of SCM.

16. Give general structure of the SRS.

(a) Define SRS. Explain various components of SRS. Also discuss importance of maintenance by giving an example.

(b) Discuss the programming paradigms given below: Imperative paradigm (i) Functional paradigm (ii) Logical paradigm (iii) Object-oriented paradigm (iv) Explain the programming paradigms given.

7. (a) Explain entity relationship diagram with the help of model.

(b) Discuss advantages and disadvantages of waterfall model.

8. Various types of entity resolution.

9. Explain the following types of entity resolution: (a) Press (b) Transaction (c) Query (d) Entity (e) Communication entity.

2. Data Store.

3. (a) Explain the various methods of programming paradigms.
UNIT I

I. Define Data. Information, Domain and Attribute.

2. Define Database and its components. Discuss its advantages.

3. (a) Define DBMS, its working, merits and demerits.

4. (b) Discuss Role of DBA and his working.

VIII. (b) Define primary key and foreign key with example.

5. (d) Define Physical and Logical data independence.

6. (e) Discuss simple and complex mapping.

Note: Attempt Five questions in all. Select at least one question from each unit. Q. No. 1 is compulsory.

Time: Three Hours

Maximum Marks: 80

BCA-235

FUNDAMENTALS OF DATABASE

BCA/D-17

1243

ROLL NO. ..........................

Total Pages: 02
16 (b) Relational and Integrity Constraints
(a) Model based on 1:1 association
(b) Write notes on the following:

8. Explain relational model with its properties.

Unit IV

16 merits and demerits
Discuss Record based and Object based data models with

6. What is E-R diagram? Discuss its symbols. Make an

E-R diagram for Teacher-Student Relationship.

Unit III

16 (b) Classification of DBMS
(a) Centralized vs Client Server Database
(b) Write notes on the following:

5. their interlinking mapphigs

4. Explain three levels of Database Architecture. Also show

Unit II
1. What is function of differentiation?
2. What is formula for Regular False method?
3. What is the order of convergence of False position method?
4. What is the use of Newton-Raphson method?
5. What is Chapeyre Polynomials?
6. What is approximation of function by Taylor Series?
7. What is approximation of function by Newton Forward Interpolation Formula?

Note: Attempt five questions in all, selecting at least one from each List. No. 1 is compulsory.

Maximum Marks: 80

Time: Three Hours

BCA-236
NUMERICAL METHODS
COMPUTER ORIENTED
BCA/D-17

Total Pages: 03
Roll No. 03
6. Write short notes on the following:

**Unit II**

5. Given \( y = \frac{x^2}{p} \). Find \( y(0) = 0 \). Find \( y'(0) \) with \( n = 0.2 \).

4. Given \( y = x \). Find for \( y = 1 \) by Euler's method.

3. Explain Barycentric method.

**Unit III**

16. The following data

Find \( f(x) \) by Newton's divided difference method from

Approximation of equations by Taylor Series

Interpolation

16. Write short notes on the following:

**Unit IV**

16. Evaluate by Gaussian quadrature formula.

2.4

network 

(d) Explain how frame relay is a virtual circuit 

(e) Why are smaller cells preferred in mobile phone

(f) Discuss the need for switching in DC signalling in telephone system.

(g) How AC signalling overcome the problems faced

(b) Conceptual Questions

From each unit 0.5 to 1 is compulsory.

Note: Attempt five questions in all selecting one question

Maximum Marks: 40

Time: Three Hours
6. (a) Discuss the various issues in cellular phone systems.
(b) Discuss the various standards used for cellular phone systems. Justify using suitable examples.
(c) What was the prime objective of ISDN system?

II.9. (a) Discuss how space-division and time-division switching is combined using suitable examples. Also, discuss various specifications of IS-722-C standard.
(b) Explain how multiple and analog voice signals are digitized.
(c) What do you mean by physical layer standards?
Discuss SAP-1 architecture in detail.

Unit

8 × 4 = 8

(d) Explain SPHL and PCHL instructions.

(e) When do you mean by extended register?

(f) The positive clock edge occurs halfway through?

(g) When are software interrupts?

Computer Question

From each Unit (a) to (e), answer one question.

Note: Answer one question in all, selecting one question

Time: Three Hours

Maximum Marks: 40

BSIT-304
AND PROGRAMMING-1
MICROPROCESSOR ARCHITECTURE

12133

ESET-5-17

Total Pages: 02
Draw and discuss the architecture of 8085 microprocessor.

LDAX rP, SHLD address, SFLAG rP, LHLD address.

Explain the following instructions:

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

Explain fetch-execute overlap.

Unit III

Explain the following instructions at address 3000H. Write a program that copies these
Suppose that 1024 bytes of data are stored between

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

Explain push and pop instructions.

Example.

Unit IV

Explain INC instruction in SAP-III.

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

Explain the arithmetic and logical instructions with

Unit V

NIZR.

Register the clock frequency of the system is 1
Introduce time delay of 1 millisecond only one
Write a detailed subroutine for SAP-II computer to
3. Explain the concept of system calls and system
5. Resource Manager.
6. Explain the role of operating system as
7. T.H.
8. (a) Scheduling
   (b) Hardware Solutions of Critical Section
   (c) Turnaround Time and Waiting Time
   (d) Spooling
   (e) Write short notes on the following:

Compulsory Question

Carry equal marks.

Note: Attempt five questions in all. Selecting one question
Maximum Marks: 40

Time: Three Hours
each of the scheduling in Part A.

What is the run around time of each process for

 priority (a) and RR (quantum = 1) Scheduling.

Priority (a) Smaller Priority number implies a higher

 These processes with FCFS, SJF, Non-preemptive

 Draw your Gantt Charts illustrating the execution of

 The processes are assumed to have arrived in the order

<table>
<thead>
<tr>
<th>Process</th>
<th>Longest</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
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CPU Burst Time in milliseconds:

Consider the following set of processes with the burst

 Size and their Preemptions:

When do you mean by the term Process? Explain Process

Unit 1

System

Difference Real Time and Time Sharing Operating
Compulsory Question

Note: Do as directed. Q. No. 1 is compulsory.

Time: Three Hours

Paper-VI
Literature in English (1750-1830)

ENGLISH

16532
BSN/D-17

Total Pages: 3
UNIT I

Critically examine "Poor Relations" as an essay.

OR

Charles Lamb as an essayist.

On the basis of your study of the prescribed essays, discuss "Contemporary England." Comment.

"Emma" deals with the life of upper-middle class of the 19th century.

UNIT II

Discuss the main features of the English Novel during 1750 and 1830.

OR

Elaborate on the main ideas dealt with in the "Vicar of Wakefield."

Comment on the treatment of sentiment and pathos in The "Vicar of Wakefield."

Note: Attempt any two from the following.
two belonging to my wife; and every day my wife was inculcated my studies under her guidance and I had to pledge a jewel or and my wife occupied cost me only four rupees a month, but my wife did not occupy any use for one month. I was a poor man. Down the house which the real, and I paid ten rupees a month for the next three hundred ground. After deep thoughts, I concluded to pay

I left it alone for a few days, not knowing what to do with it.

Follow:

1. Write an essay in about 450 words on any one of the following topics:

   a. Attempt all questions.

   b. Maximum Marks: 80

   c. Time: Three Hours

   d. Paper-VIII

   e. Grammar and Comprehension (English Usage)

   f. ENGLISH

   g. BSM/D-17

   h. Total Pages: 6

   i. RECIPE

2. Read the passage given below and answer the questions that follow:

   a. Living in a Big City

   b. Men is a Judge of his own merits.

   c. Devoted a Part of Education.

   d. The Pleasures of Reading a Novel.

   e. Write an essay in about 450 words on any one of the

      f. Note: Attempt all questions.

      g. Maximum Marks: 80

      h. Time: Three Hours

   i. RECIPE

   j. Tomorrow would be cold.

   k. Easy to talk than sit idle.

   l. Eleven players in the team of cricket.

   m. No cause of worry.

   n. No hope of his coming back.

   o. A page is missing from this book.

   p. Several VIP rooms in this hotel.

   q. A terrace room in the sea.

   r. Several people were in the room.

   s. No damage to the plane.

   t. Introduction: Here are the following sentences using introductory here

   u. Subject + Verb + Preposition + Object

   v. Subject + Verb + Preposition + (Prep) + (II) + that clause.

   w. Here/There + Subject + Verb.

   x. Subject + Verb + to-infinitive
1. Fill in the blanks with appropriate form of the verb given in brackets (any order):

(5) The rain (stop) before I got there.
(6) He (die) last night.
(7) I (play) cricket since Sunday.
(8) The movie (be) released recently.
(9) You (do) anything interesting?
(10) I (not) at all confident.

2. Fill in the blanks with appropriate nouns given in brackets:

(11) available on this subject (information/informations) is a...beautiful
(12) The (scenery/scenariess) of Kashmir is 8

3. Fill in the blanks with appropriate verbs given in brackets:

(13) Whom did he see to sell the read-engines? (2x5=10)
(14) What was the noise while he went into this budget?
(15) Which one did the referee send from the team?

4. Questions:

(a) Was prepared to give away the engine at a very low price?
(b) I entered the chemist's room and mentioned my business.
(c) The municipal office one day I bought up my car as
(d) Whynot the newspaper? With great reputation. I mean to
(e) Buy for the newspaper. See the refrigerator. He may
(f) Someone suggested. See the refrigerator. He may
(g) Someone suggested. See the refrigerator. He may
dispose of an engine. Am I wrong? You have a genuine
(h) Have you ever been published?
(i) This is one of the best books that have/have not
dispose of an engine? Am I wrong? You have a genuine
(j) Where would you want to talk?
(k) How many do you want to tell?
(l) Why thank you, are due to him.
(m) We had our...meal instead.
(n) This...machinery is defective.

5. Paragraph:

I was prepared to give away the engine at a very low price.
I entered the chemist's room and mentioned my business.
At the municipal office one day I bought up my car as
I mean to buy for the newspaper with great reputation.
I may dispose of an engine. Someone suggested. I may
dispose of an engine. Am I wrong? You have a genuine
Have you ever been published?
This is one of the best books that have/have not
dispose of an engine? Am I wrong? You have a genuine
Where would you want to talk?
How many do you want to tell?
Why thank you, are due to him.
We had our...meal instead.
This...machinery is defective.

5. Fill in the blanks with appropriate prepositions (Any Eight):

(a) He generally travels ________ from Delhi to Mumbai.
(b) He was going ________ to the house.
(c) He poured milk ________ the jug.
(d) Somashekh _____ a farm.
(e) Some women work ________ a farm.
(f) Gold is found ________ Africa.
(g) The end, he won the game.
(h) The team is running ________ time.
(i) He came back ________ time for the project.
(j) We work from 9 am ________ 5 pm.

6. Correct the following sentences of adverbs (Any Eight):

(a) No ________ he lived ________ (less/fever) than his sister.
(b) I shall stay ________ for ________ (few/very) days.
(c) Ramesh is ________ (cleverer/more clever) than I am.
(d) He is ________ (poorest/most poorest) man in the town.
(e) He is ________ (the weakest/warner) of the two.
(f) He is ________ (the wealthiest/warner) of the two.

8. Frame sentences by using any Eight sentence patterns:

Further details:

(i) He completed the lesson without ________ (further).

(j) There are ________ (many/much) books in the library.

(k) Ramesh is ________ (older) than his sister.

(l) Of gold and silver, the latter ________ (costlier) is cheaper.

(m) He does not have ________ (something/anything) to say.

(n) The movie ________ a hit ________ (it),

(o) No ________ he lived ________ (less/fever) than his sister.

(p) I shall stay ________ for ________ (few/very) days.

(q) Ramesh is ________ (cleverer/more clever) than I am.

(r) He is ________ (poorest/most poorest) man in the town.

(s) He is ________ (the weakest/warner) of the two.

(t) He is ________ (the wealthiest/warner) of the two.

8. Fill in the blanks with appropriate prepositions (Any Eight):

(a) He generally travels ________ from Delhi to Mumbai.
(b) He was going ________ to the house.
(c) He poured milk ________ the jug.
(d) Somashekh _____ a farm.
(e) Some women work ________ a farm.
(f) Gold is found ________ Africa.
(g) The end, he won the game.
(h) The team is running ________ time.
(i) He came back ________ time for the project.
(j) We work from 9 am ________ 5 pm.
P.I.O.

16565/150/KD/454

1. Explain the political ideas of Gopal Krishna Gokhale.

2. Explain the social and educational ideas of Swami Dayanand.

3. Explain the Dravid Theory presented by Dada Bhau Nagpaul.

4. Explain the political ideas of B. R. Ambedkar.

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

Maximum Marks: 80

Time: Three Hours

Paper-II
(Indian Political Thinkers-I)

POLITICAL SCIENCE

BSN/D-17

Roll No. 6

Total Pages: 6

Who was known as a Father of Creating Political Consciousness in the Indian mind?
6. Swami Vivekanand was a Religious Reformer. Explain.

7. Describe the political ideas of Lala Lajpat Rai.

8. Swamy is my birth right and I shall have it. In the Light of

9. Multiple choice questions:

(a) Who established ATMAVA Sabha?

(b) Who is known as the Father of Economic Nationalism?

(i) Dada Bhau Narotil

(ii) Govinda

(iii) Vivekanand

(iv) Tilak

(c) Who is known as the Martin Luther of India?

(i) Raja Ram Mohan Roy

(ii) Dr. Ambedkar

(iii) Devenand Saraswati

(iv) Dada Bhau Narotil

10. Who is the Father of Indian Nationalism?

(i) Raja Ram Mohan Roy

(ii) Vivekanand

(iii) Dada Bhau Narotil

(iv) Govinda

11. Who is the Father of Indian Nationalism?

(i) Raja Ram Mohan Roy

(ii) Vivekanand

(iii) Dada Bhau Narotil

(iv) Govinda

12. Who is the Father of Indian Nationalism?

(i) Raja Ram Mohan Roy

(ii) Vivekanand

(iii) Dada Bhau Narotil

(iv) Govinda
Main characteristic of Anuabhodi's Passive Resistance

Bean Krishnan Mission was established in

Gopal Krishnan Gokhale

Who established Services of India Society?