Paper Code: 4110

| Programme | Exam Code | Course Code |
|---|---|---|
| Bachelor of Arts | 121204 | BARL-4175 |
| Bachelor of Science (Economics) | 121304 | BECL-4175 |

**Semester- IV**

**Course Title: Economics (International Economics and Public Finance)**

**(40)**

**Time Allowed: 3 Hours** **Max Marks: 80**

**Attempt five questions, selecting at least one from each section fifth question may be attempted from any section. Each question carries 16 marks.**

## Section- I

1. Critically examine classical theory of International trade. (16)
2. What do you understand by policy of Protection. Give arguments in favour. Protection in LDC. (6,10)

## Section-II

3. What do you mean by Disequilibrium in BOP country? Suggest measures to correct deficit in BOP. (6,10)

4. Distinguish between fixed and flexible exchange Rate. Give arguments for and against flexible exchange rate. (6,10)

## Section-III

5. Describe nature and scope of public finance. (16)
6. What is the significance of public expenditure in a country like. Also briefly explain the canons of public expenditure (6,10)

## Section-IV

7. Explain the sources of Public Revenue. Also describe the features of a good taxation system. (6,10)
8. Describe the rationale for public debt. How does it create a burden on present and future generation? (10,6)

Paper Code: 4111

| Programme | Course Code | Exam Code |
|---|---|---|
| Bachelor of Arts | BARL -4453 | 121204 |
| Bachelor of Science (Economics) | BECL-4453 | 121304 |

**Semester–IV**

**Course Title: Quantitative Techniques (Quantitative Techniques – IV)**

**Time Allowed: 3 Hrs.** **Max Marks: 80**

**Note:** Candidates are required to attempt five questions, selecting atleast one question from each section. The fifth question may be attempted from any section. Each question carries 16 marks. Use of simple calculator and Log table is allowed.

**Section A**

1. (a) Define Gompertz curve. What are its different shapes?

(b) Fit a parabola of Second degree to the following data:

| X | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| Y | 6 | 13 | 18 | 20 | 20 | 18 | 14 |

(6, 10)

2. Fit the multiple linear regression $X_1$ on $X_2$ and $X_3$ from the following data:

| $X_1$ : | 3 | 5 | 6 | 8 | 12 | 14 |
|---|---|---|---|---|---|---|
| $X_2$ : | 16 | 10 | 7 | 4 | 3 | 2 |
| $X_3$ : | 90 | 72 | 54 | 42 | 30 | 12 |

(16)

**Section B**

3. (a) Distinguish between probability mass function and probability density function.

(b) Two unbiased dice are thrown. Find expected value of sum of numbers of point on them. Also find variance. (6, 10)

4. In a bolt factory Machines A, B and C manufacture respectively 25%, 35% and 40% of the total of its output. Of them 5, 4 and 2 percent respectively are defective bolts. A bolt is drawn at random from the product and is found to be defective. What is the probability that it was manufactured by machine B? (16)

## Section C

5. Fit a Poisson distribution to the following data:

| x | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|
| f | 143 | 90 | 42 | 12 | 9 | 3 | 1 |

Given that $e^{-0.89}=0.410656$ (16)

6. Derive the properties of Gamma function in details. (16)

## Section D

7. (a) Explain Standard Error of Estimate.

(b) Sampling and non-sampling errors. (8, 8)

8. What is random sampling? Discuss its various types with the help of an example. (16)

Paper Code: 4138

| Programme | Course Code | Exam Code |
|---|---|---|
| Bachelor of Arts | BARL-4609 (OPT-IV) | 121204 |
| Bachelor of Science (Economics) | BECL-4607 (OPT-IV) | 121304 |

Semester–IV

Course Title: Economics (Honours); International Economics

Time Allowed: 3 Hours Max. Marks: 80

Note: Candidates are required to attempt five questions, selecting atleast one question from each section. The fifth question may be attempted from any section. Each question carries 16 marks.

## Section A

1. Critically examine the Comparative cost theory of international trade.
2. Discuss the secular deterioration hypothesis of term of trade. Explain its limitations also.

## Section B

3. Discuss, in detail, trade creation and trade diversion effects of custom union.
4. Discuss, in detail, the relationship between trade, aid and economic development.

## Section C

5. Distinguish between fixed and flexible exchange rate. What are its merits and demerits?
6. Critically examine the concept of foreign trade multiplier.

## Section D

7. Discuss the objective and functions of IMF. What are its limitations?
8. Explain the success and failures of East Asian countries.

**Exam Code: 121204/121304** **Paper Code: 4109**

**Programme: Bachelor of Arts/Bachelor of Science Semester-IV**

**Course Title: Computer Applications (Vocational) (Relational Database Management Systems)**

**Course Code: BARM/BECM-4124**

**Time Allowed: 3 Hours** **Maximum Marks: 50**

**Note:** Candidates are required to attempt five questions in all, selecting at least one question from each section. The fifth question may be attempted from any Section. Each question carries 10 marks.

## Section A

Q1) What do you mean by database? Explain RDBMS and discuss the three-level architecture of database management system.

Q2) a) What do you mean by DBA? What are its various responsibilities?

b) Discuss data models briefly.

## Section B

Q3) Define Oracle and salient features of Oracle. Discuss various data types used in Oracle.

Q4) a) Discuss the DROP TABLE command in SQL. What is its purpose, and how does it differ from the TRUNCATE TABLE command?

b) Explain TCL commands.

## Section C

Q5) Discuss the various Join methods in SQL with the help of suitable examples. Also explain the concept of subqueries in SQL.

Q6) What do you mean by functions in SQL. Explain Arithmetic and Date/Time functions with help of examples.

## Section D

Q7) What is PL/SQL? Explain relationship between SQL & PL/SQL. What are its advantages? Explain the basic block structure of program in PL/SQL.

Q8) Explain:-

a) Control Statements used in PL/SQL.

b) Discuss the significance of declaring variables using variable attributes in PL/SQL.

**Paper Code: 4108**

| Programme | Exam Code | Course Code |
|---|---|---|
| Bachelor of Arts | 121204 | BARM-4134 |
| Bachelor of Science (Computer Science) | 121304 | BCSM-4134 |
| Bachelor of Science (Economics) | | BECM-4134 |

**Semester-IV**

**Course Title: Computer Science (Data Structures)**

**(40)**

**Time Allowed: 3 Hours** **Max Marks: 50**

**Note: There are eight questions of equal marks (10 marks each). Candidates are required to attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any section. The students can use Non—programmable/ scientific & Non—storage type calculator.**

## Section A

1. What do you mean by Data Structures? How can you measure complexity of an algorithm? (10)
2. a) What is array? How it is represented in memory? (6)

   b) What do you understand by multi dimensional array? (4)

## Section B

3. a) Explain types of Linked list. (6)
   b) Write advantages of linked list over array. (4)
4. Write Quicksort algorithm and apply it on the following set of numbers to arrange them in the ascending order: (10)
   99,88,77,66,55,44,33,22,11

## Section C

5. a) How will you represent queues in memory? (6)
   b) What do you mean by priority queue? (4)
6. Using Binary search, find the locations of the elements 44 and 101. (10)
   99, 11, 33, 88, 22, 44, 77

## Section D

7. Explain DFS and BFS graph traversals algorithms with examples. (10)
8. Write a note on the following (4*2.5 = 10)
   a) Binary Search tree L
   b) Complete binary tree
   c) Heap
   d) Adjacency matrix

Paper Code: 4106

| Programme | Exam Code | Course Code |
|---|---|---|
| Bachelor of Arts | 121204 | BARM-4333 (I) |
| Bachelor of Science (Non-Medical) | 121304 | BSNM-4333 (I) |
| Bachelor of Science (Economics) | | BECM-4333 (I) |
| Bachelor of Science (Computer Science) | | BCSM-4333 (I) |

**Semester-IV**

**Course Title: Mathematics (Statics and Vector Calculus)**
**(40)**

**Time Allowed: 3 Hours** **Max Marks: 80**

**Note: Attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section. Each question carries equal marks (16 marks for each question).**

Section -A

Q 1.(a) State and prove Lami's Theorem.

Q 1.(b) The greatest and least resultants that two forces can have are of magnitude P and Q respectively. Show that when they act at an angle θ, their resultant is of magnitude $\sqrt{P^2cos^2\frac{\theta}{2} + Q^2sin^2\frac{\theta}{2}}$.

Q 2.(a) State Varignon's Theorem and using this theorem calculate the moment of F about the origin when a force acts at a point (3,4) of the XY plane, The force is directed away from the origin and inclined at 60 ° to the X-axis. The horizontal component of F is 5 kg wt. Also find force F.

Q 2.(b) Forces of magnitude 5 kg, 10 kg, Q kg and R kg act along the sides AB, BC, DC and DA of a square ABCD and forces each of magnitude $5\sqrt{2}$ kg act along the sides BD, CA. If these forces are equivalent to a couple, find Q and R.

## Section -B

Q 3.(a) Two equal weights rest on the faces of a double inclined plane whose inclinations to the horizon are $\alpha$ and $\beta$ and are connected by a string passing over a smooth pulley on the vertex. If the weights be in limiting equilibrium show that the coefficient of friction is equal to $\frac{\sin\alpha - \sin\beta}{\cos\alpha + \cos\beta}$

Q 3.(b) How high can a particle rest inside a rough hollow sphere of radius r if the coefficient of friction is $\mu$.

Q 4.(a) ABC is an equilateral triangle of side 40 cms. Weights 5, 1 , 3 kgs are placed at points A, B, C respectively and Weights 2, 4 , 6 kgs are placed at mid points of BC, CA and AB respectively. Find the distance of their C.G. from B.

Q 4.(b) A uniform solid consists of a cone of semi- vertical angle 45° cemented on a hemisphere on the same base. Show that the C.G. of the body divides its central axis in the ratio 7 : 5.

## Section –C

Q 5.(a) Find the directional derivative of $f(x, y, z) = x^2y^2z^2$ at the point (1, 1, - 1) in the direction of the tangent to the curve $x = e^t$, $y = 2\sin t + 1$, $z = t - \cos t$ at $t = 0$.

Q 5.(b) If $\vec{r} = t^3 \hat{i} + \left( 2t^3 - \frac{1}{5t^2} \right) \hat{j}$,

show that $\vec{r} \times \frac{d\vec{r}}{dt} = \hat{k}$

Q 6.(a) Find the constants a, b, c so that the vector $\vec{r} = (x + 2y + az)\hat{i} + (bx - 3y - z)\hat{j} + (4x + cy + 2z)\hat{k}$ is irrotational.

Q 6.(b) Evaluate

$$\int_0^1 \left[ t\hat{i} + (t^2 - 2t)\hat{j} + (3t^2 + 3t^3)\hat{k} \right] dt$$

## Section -D

Q 7.(a) State Stoke's Theorem and verify it for $\vec{F} = y\hat{i} + z\hat{j} + x\hat{k}$ where S is the upper half surface of the sphere $x^2 + y^2 + z^2 = 1$ and C is boundary.

Q 7.(b) Verify Green's theorem in a plane for

$$\oint_C \left( (x^2 - xy^3)dx + (y^2 - 2xy)dy \right)$$

where C is the square with vertices (0,0), (2,0), (2,2), (0,2),

Q 8.

State Gauss's Divergence Theorem and use it to evaluate $\iint_S \vec{f}.\hat{n}\,dS$

where $\vec{f} = 4xy\hat{i} + yz\hat{j} - xz\hat{k}$

and S is the surface of the cube bounded by the planes $x = 0, x = 2, y = 0, y = 2, z = 0, z = 2$.

(FOR REAPPEAR CANDIDATES ONLY (2023-24)), 2021-22.)

Paper Code: 9412.

| Programme | Exam Code | Course Code |
|---|---|---|
| Bachelor of Arts | 121204 | BARM-4333 (I) |
| Bachelor of Science (Non-Medical) | 121304 | BSNM-4333 (I) |
| Bachelor of Science (Economics) | | BECM-4333 (I) |
| Bachelor of Science (Computer Science) | | BCSM-4333 (I) |

**Semester-IV**

**Course Title: Mathematics (Statics and Vector Calculus)**

**(40)**

**Time Allowed: 3 Hours** **Max Marks: 40**

**Note: Attempt five questions, selecting at least one question from each section. The fifth question may be attempted from any Section. Each question carries equal marks (8) marks for each question).**

Section -A

Q 1.(a) State and prove Lami's Theorem.

Q 1.(b) The greatest and least resultants that two forces can have are of magnitude P and Q respectively. Show that when they act at an angle θ, their resultant is of magnitude $\sqrt{P^2\cos^2\frac{\theta}{2}+Q^2\sin^2\frac{\theta}{2}}$.

Q 2.(a) State Varignon's Theorem and using this theorem calculate the moment of F about the origin when a force acts at a point (3,4) of the XY plane, The force is directed away from the origin and inclined at 60 ° to the X-axis. The horizontal component of F is 5 kg wt. Also find force F.

Q 2.(b) Forces of magnitude 5 kg, 10 kg, Q kg and R kg act along the sides AB, BC, DC and DA of a square ABCD and forces each of magnitude $5\sqrt{2}$ kg act along the sides BD, CA. If these forces are equivalent to a couple, find Q and R.

## Section -B

Q 3.(a) Two equal weights rest on the faces of a double inclined plane whose inclinations to the horizon are $\alpha$ and $\beta$ and are connected by a string passing over a smooth pulley on the vertex. If the weights be in limiting equilibrium show that the coefficient of friction is equal to $\frac{\sin\alpha - \sin\beta}{\cos\alpha + \cos\beta}$

Q 3.(b) How high can a particle rest inside a rough hollow sphere of radius r if the coefficient of friction is $\mu$.

Q 4.(a) ABC is an equilateral triangle of side 40 cms. Weights 5, 1 , 3 kgs are placed at points A, B, C respectively and Weights 2, 4 , 6 kgs are placed at mid points of BC, CA and AB respectively. Find the distance of their C.G. from B.

Q 4.(b) A uniform solid consists of a cone of semi- vertical angle 45° cemented on a hemisphere on the same base. Show that the C.G. of the body divides its central axis in the ratio 7 : 5.

## Section –C

Q 5.(a) Find the directional derivative of $f(x, y, z) = x^2y^2z^2$ at the point (1, 1, - 1) in the direction of the tangent to the curve $x = e^t$, $y = 2\sin t + 1$, $z = t - \cos t$ at $t = 0$.

Q.5.(b) If $\vec{r} = t^3\hat{i} + \left(2t^3 - \frac{1}{5t^2}\right)\hat{j}$, show that $\vec{r} \times \frac{d\vec{r}}{dt} = \hat{k}$

Q.6.(a) Find the constants a,b, c so that the vector $\vec{r} = (x + 2y + az)\hat{i} + (bx - 3y - z)\hat{j} + (4x + cy + 2z)\hat{k}$ is irrotational.

Q.6.(b) Evaluate

$$\int_0^1 \left[t\hat{i} + (t^2 - 2t)\hat{j} + (3t^2 + 3t^3)\hat{k}\right] dt$$

## Section -D

Q.7.(a) State Stoke's Theorem and verify it for $\vec{F} = y\hat{i} + z\hat{j} + x\hat{k}$ where S is the upper half surface of the sphere $x^2 + y^2 + z^2 = 1$ and C is boundary.

Q.7.(b) Verify Green's theorem in a plane for $\oint_C \left((x^2 - xy^3)dx + (y^2 - 2xy)dy\right)$ where C is the square with vertices (0,0), (2,0),(2,2),(0,2),

Q8.

State Gauss's Divergence Theorem and use it to evaluate $\iint_S \overrightarrow{f}.\hat{n}\,dS$

where $\overrightarrow{f} = 4xy\hat{i} + yz\hat{j} - xz\hat{k}$

and S is the surface of the cube bounded by the planes $x = 0, x = 2, y = 0, y = 2, z = 0, z = 2$.

Paper Code: 4107

| Programme | Exam Code | Course Code |
|---|---|---|
| Bachelor of Arts | 121204 | BARM-4333(II) |
| Bachelor of Science (Non-Medical) | 121304 | BSNM-4333(II) |
| Bachelor of Science (Economics) | | BECM-4333 (II) |
| Bachelor of Science (Computer Science) | | BCSM-4333 (II) |

**Semester-IV**
**Course Title: Mathematics (Solid Geometry)**
**(40)**

**Time Allowed: 3 Hours** **Max Marks: 60**

**Note: Attempt five questions in all, selecting at least one question from each section. The fifth question may be attempted from any Section. All question carry equal 12 marks.**

**Section-A**

1(a). Find the equation of the cylinder whose generators are parallel to the line $\frac{x}{1} = \frac{y}{-2} = \frac{z}{3}$ and whose guiding curve is the ellipse $x^2 + 2y^2 = 1, z = 0$.

(b). Find the equation of the right circular cylinder whose generating circle is $x^2 + y^2 + z^2 = 4, x + y + z = 3$.

2(a). Find the equation of the enveloping cylinder of the conicoid $ax^2 + by^2 + cz^2 = 1$ whose generators are parallel to the line $\frac{x}{l} = \frac{y}{m} = \frac{z}{n}$.

(b). Obtain the equation of the right circular cylinder described on the circle through the points (1, 0, 0), (0, 1, 0), (0, 0, 1) as the guiding circle.

**Section-B**

3(a). Find the equation of the cone, whose vertex is the point (2, 3,-5) and the guiding curve is $y^2 = 8x, z = 0$.

(b). Find the equation of the right circular cone whose vertex is P (2, 3, 1), axis makes equal angles with coordinate axes and semi vertical angle is $60^\circ$.

4(a). Find the value of λ if the plane $\lambda x + y + z = 0$ cuts the cone $xy + yz + zx = 0$ in perpendicular lines.

(b). Check whether $2x^2 + 2y^2 + 7z^2 - 10yz - 10zx + 2x + 2y + 26z - 17 = 0$ represents a cone. If yes, find the coordinates of vertex of this cone.

## Section-C

5(a). Check whether the feet of the six normals from $(\alpha, \beta, \gamma)$ to the ellipsoid $\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1$ lies on the cone $\frac{a^2(b^2-c^2)}{x}\alpha + \frac{b^2(c^2-a^2)}{y}\beta + \frac{c^2(a^2-b^2)}{z}\gamma = 0$ or not.

(b). Trace the locus of the equation $\frac{x^2}{a^2} + \frac{y^2}{b^2} = \frac{2z}{c}$ where a, b, c are positive.

6(a). Find the condition that the plane $lx + my + nz = p$ may touch the conicoid $ax^2 + by^2 + cz^2 = 1$.

(b). Reduce the following equation to the standard form and identify the curve

$$x^2 - 4xy + 4y^2 - 32x + 4y + 16 = 0.$$

## Section-D

7. Check whether the $5x^2 - 16y^2 + 5z^2 + 8yz - 14zx + 8xy + 4x + 20y + 4z - 24 = 0$ represents hyperbolic paraboloid. If yes, find the coordinates of its vertex and the equation of its axes.

8(a).Check whether the surface represented by

$x^2 + 6y^2 - z^2 - yz + 5xy + 2x + 5y = 0$ is hyperbolic cylinder. Justify your answer.

(b). Reduce the equation into standard conic

$$9x^2 + 4y^2 + 4z^2 + 8yz + 12zx + 12xy + 4x + y + 10z + 1 = 0.$$

FOR REAPPEAR CANDIDATES ONLY (2021-22), (2023-24).

Paper Code: 9413.

| Programme | Exam Code | Course Code |
|---|---|---|
| Bachelor of Arts | 121204 | BARM-4333(II) |
| Bachelor of Science (Non-Medical) | 121304 | BSNM-4333(II) |
| Bachelor of Science (Economics) | | BECM-4333 (II) |
| Bachelor of Science (Computer Science) | | BCSM-4333 (II) |

**Semester-IV**

**Course Title: Mathematics (Solid Geometry)**

**(40)**

**Time Allowed: 3 Hours** **Max Marks: 40**

**Note: Attempt five questions in all, selecting at least one question from each section. The fifth question may be attempted from any Section. All question carry equal 8 marks.**

**Section-A**

1(a). Find the equation of the cylinder whose generators are parallel to the line $\frac{x}{1} = \frac{y}{-2} = \frac{z}{3}$ and whose guiding curve is the ellipse $x^2 + 2y^2 = 1, z = 0$.

(b). Find the equation of the right circular cylinder whose generating circle is $x^2 + y^2 + z^2 = 4, x + y + z = 3$.

2(a). Find the equation of the enveloping cylinder of the conicoid $ax^2 + by^2 + cz^2 = 1$ whose generators are parallel to the line $\frac{x}{l} = \frac{y}{m} = \frac{z}{n}$.

(b). Obtain the equation of the right circular cylinder described on the circle through the points (1, 0, 0), (0, 1, 0), (0, 0, 1) as the guiding circle.

**Section-B**

3(a). Find the equation of the cone, whose vertex is the point (2, 3,-5) and the guiding curve is $y^2 = 8x, z = 0$.

(b). Find the equation of the right circular cone whose vertex is P (2, 3, 1), axis makes equal angles with coordinate axes and semi vertical angle is $60^\circ$.

4(a). Find the value of λ if the plane $\lambda x + y + z = 0$ cuts the cone $xy + yz + zx = 0$ in perpendicular lines.

(b). Check whether $2x^2 + 2y^2 + 7z^2 - 10yz - 10zx + 2x + 2y + 26z - 17 = 0$ represents a cone. If yes, find the coordinates of vertex of this cone.

## Section-C

5(a). Check whether the feet of the six normals from $(\alpha, \beta, \gamma)$ to the ellipsoid $\frac{x^2}{a^2} + \frac{y^2}{b^2} + \frac{z^2}{c^2} = 1$ lies on the cone $\frac{a^2(b^2-c^2)}{x}\alpha + \frac{b^2(c^2-a^2)}{y}\beta + \frac{c^2(a^2-b^2)}{z}\gamma = 0$ or not.

(b). Trace the locus of the equation $\frac{x^2}{a^2} + \frac{y^2}{b^2} = \frac{2z}{c}$ where a, b, c are positive.

6(a). Find the condition that the plane $lx + my + nz = p$ may touch the conicoid $ax^2 + by^2 + cz^2 = 1$.

(b). Reduce the following equation to the standard form and identify the curve

$$x^2 - 4xy + 4y^2 - 32x + 4y + 16 = 0.$$

## Section-D

7. Check whether the $5x^2 - 16y^2 + 5z^2 + 8yz - 14zx + 8xy + 4x + 20y + 4z - 24 = 0$ represents hyperbolic paraboloid. If yes, find the coordinates of its vertex and the equation of its axes.

8(a).Check whether the surface represented by

$x^2 + 6y^2 - z^2 - yz + 5xy + 2x + 5y = 0$ is hyperbolic cylinder. Justify your answer.

(b). Reduce the equation into standard conic

$$9x^2 + 4y^2 + 4z^2 + 8yz + 12zx + 12xy + 4x + y + 10z + 1 = 0.$$

**Paper Code: 4102**

| Programme | Exam Code | Course Code |
|---|---|---|
| Bachelor of Arts | 121204 | BARL-4031 |
| Bachelor of Science (Non-Medical) | 121304 | BSNL-4031 |
| Bachelor of Science (Medical) | | BSML-4031 |
| Bachelor of Science (Economics) | | BECL-4031 |
| Bachelor of Science (Computer Science ) | | BCSL-4031 |
| Bachelor of Commerce | 121104 | BCRL-4031 |
| Bachelor of Business Administration | 121704 | BBRL-4031 |

**Semester- IV**
**Course Title: Basic Punjabi**
**(40)**

**Time Allowed: 3 Hours** **Max Marks: 80**

**ਨੋਟ: ਪ੍ਰਸ਼ਨ ਪੱਤਰ ਦੇ ਚਾਰ ਭਾਗ ਹਨ। ਵਿਦਿਆਰਥੀ ਨੇ ਹਰ ਭਾਗ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ ਲਾਜ਼ਮੀ ਹੈ, ਪੰਜਵਾਂ ਪ੍ਰਸ਼ਨ ਕਿਸੇ ਵੀ ਭਾਗ ਵਿਚੋਂ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ। ਹਰ ਪ੍ਰਸ਼ਨ ਦੇ ਬਰਾਬਰ (16) ਅੰਕ ਹਨ।**

**ਭਾਗ–ਪਹਿਲਾ**

1. ਹੇਠ ਲਿਖੀਆਂ ਕਾਵਿ-ਸਤਰਾਂ ਦੀ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ ਕਰੋ।
ਕਮਦਿਲਾਂ ਨੂੰ ਦਿਲ, ਨਪਰਿਆਂ ਪਰ ਦਈਂ।

ਯਾ ਖੁਦਾ ਸਭ ਬੇ-ਘਰਾਂ ਨੂੰ ਘਰ ਦਈਂ।
ਹਰ ਸੁਹਾਗਣ ਦਾ ਰਹੇ ਜ਼ਿੰਦਾ ਸੁਹਾਗ
ਉਮਰ ਲੰਘਦੀ ਜਾ ਰਹੀ ਨੂੰ ਵਰ ਦਈਂ
ਤੋਤਲੇ ਬੋਲਾਂ ਦਾ ਰਾਖਾ ਖੁਦ ਬਣੀ,
ਖੌਫ ਹਰ ਕਾਤਿਲ ਤੇ ਸੀਨੇ ਭਰ ਦਈਂ।

2. ਹੇਠ ਲਿਖੀਆਂ ਕਾਵਿ-ਸਤਰਾਂ ਦੀ ਪ੍ਰਸੰਗ ਸਹਿਤ ਵਿਆਖਿਆ ਕਰੋ।

ਹੁਣ ਘਰਾਂ ਨੂੰ ਪਰਤਣਾ ਮੁਸ਼ਕਿਲ ਬੜਾ ਹੈ
ਕੌਣ ਪਹਿਚਾਣੇਗਾ ਸਾਨੂੰ
ਮੱਥੇ ਉੱਤੇ ਮੌਤ ਦਸਖਤ ਕਰ ਗਈ ਹੈ
ਚਿਹਰੇ ਉੱਤੇ ਯਾਰ ਪੈੜਾਂ ਛੱਡ ਗਏ ਨੇ
ਸ਼ੀਸ਼ੇ ਵਿਚੋਂ ਹੋਰ ਕੋਈ ਝਕਦਾ ਹੈ
ਅੱਖਾਂ ਵਿਚ ਕੋਰੀ ਲਿਸ਼ਕ ਹੈ।

## ਭਾਗ-ਦੂਸਰਾ

3. ਡਾ. ਜਗਤਰ ਦੀ ਕਵਿਤਾ 'ਰੌਸ਼ਨੀ ਦਾ ਦੌਰ' ਦਾ ਸਾਰ ਆਪਣੇ ਸ਼ਬਦਾਂ ਵਿਚ ਲਿਖੋ।
4. ਮੋਹਨ ਸਿੰਘ ਦੀ ਕਵਿਤਾ 'ਸੈਦਾ ਤੇ ਸਬਜ਼ਾਂ' ਦਾ ਸਾਰ ਆਪਣੇ ਸ਼ਬਦਾਂ ਵਿਚ ਲਿਖੋ।

## ਭਾਗ-ਤੀਜਾ

5. ਕਵੀ ਪਾਸ਼ ਦੇ ਜੀਵਨ ਅਤੇ ਰਚਨਾਵਾਂ ਬਾਰੇ ਵਿਸਤ੍ਰਿਤ ਨੋਟ ਲਿਖੋ।
6. ਕਵੀ ਮੋਹਨ ਸਿੰਘ ਦੇ ਜੀਵਨ ਰਚਨਾਵਾਂ ਬਾਰੇ ਜਾਣਕਾਰੀ ਦਿਓ।

## ਭਾਗ–ਚੌਥਾ

7. ਹੇਠ ਲਿਖੇ ਅਸ਼ੁੱਧ ਸ਼ਬਦਾਂ ਨੂੰ ਸ਼ੁੱਧ ਕਰਕੇ ਲਿਖੋ।
ਸਬਦ, ਨੋਕਰੀ, ਔਖੀ, ਨਿਪੁਨਸਕ ਬੰਦਾ, ਕਿੱਕਰਾ ਦੇ ਫੁੱਲ, ਸੈਕਰੇਟਰੀ, ਗੁਰੂ ਆਮਰਦਾਸ ਜੀ, ਆਮਾਨਤ, ਗੋਰਵ।

8. ਹੇਠ ਲਿਖੇ ਅਸ਼ੁੱਧ ਸ਼ਬਦਾਂ ਨੂੰ ਸ਼ੁੱਧ ਕਰਕੇ ਲਿਖੋ।
ਅਸਕੇ, ਪੋੜੀ ਚੜ, ਕੋਲੀ ਫੜ, ਚੋਲ ਖਾ, ਗੌਲੀ, ਚਾਣ ਕੱਦੂ, ਕਾਲਿਜ, ਬੱਸਾ ਚੱਲੀਆਂ, ਹਰਮੰਦਰ ਸਾਹਿਬ, ਸੀਸਾ।

**Paper Code: 4101**

| Programme | Exam Code | Course Code |
|---|---|---|
| Bachelor of Arts | 121204 | BARL-4421 |
| Bachelor of Science (Non-Medical) | 121304 | BSNL-4421 |
| Bachelor of Science (Medical ) | | BSML-4421 |
| Bachelor of Science (Economics) | | BECL-4421 |
| Bachelor of Science (Computer Science ) | | BCSL-4421 |
| Bachelor of Commerce | 121104 | BCRL-4421 |
| Bachelor of Business Administration | 121704 | BBRL-4421 |

**Semester- IV**

**Course Title: Punjabi (Compulsory)**

(160)

**Time Allowed: 3 Hours** **Max Marks: 80**

**ਨੋਟ: ਕੁੱਲ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ ਜ਼ਰੂਰੀ ਹਨ। ਹਰੇਕ ਭਾਗ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ ਲਾਜ਼ਮੀ ਹੈ।ਹਰ ਪ੍ਰਸ਼ਨ ਦੇ ਬਰਾਬਰ (16) ਅੰਕ ਹਨ। ਪੰਜਵਾਂ ਪ੍ਰਸ਼ਨ ਕਿਸੇ ਵੀ ਭਾਗ ਵਿਚੋਂ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ।**

**ਭਾਗ–ਓ**

1) "ਪਗਡੰਡੀਆਂ" ਸਵੈਜੀਵਨੀ ਦਾ ਵਿਸ਼ਾ–ਵਸਤੂ ਲਿਖੋ।

2) "ਪਗਡੰਡੀਆਂ" ਸਵੈਜੀਵਨੀ ਦਾ ਸਾਰ ਸੰਖੇਪ ਵਿੱਚ ਆਪਣੇ ਸ਼ਬਦਾਂ ਵਿੱਚ ਲਿਖੋ। (16 ਅੰਕ)

**ਭਾਗ-ਅ**

3) "ਫ਼ਾਸਲੇ" ਨਾਟਕ ਦਾ ਵਿਸ਼ਾ-ਵਸਤੂ ਕੀ ਹੈ? ਸਪੱਸ਼ਟ ਕਰੋ।

4) "ਫ਼ਾਸਲੇ" ਨਾਟਕ ਦੀਆਂ ਨਾਟਕੀ ਜੁਗਤਾਂ ਬਾਰੇ ਚਰਚਾ ਕਰੋ। (16 ਅੰਕ)

**ਭਾਗ-ਏ**

5) ਪੰਜਾਬ ਸਰਕਾਰ ਦੇ ਮੁੱਖ ਚੋਣ ਅਫ਼ਸਰ ਨੂੰ ਇੱਕ ਚਿੱਠੀ ਰਾਹੀਂ ਆਪਣੇ ਪਿੰਡ ਵਿੱਚ ਚੋਣਾਂ ਦਰਾਨ ਹੋਈਆਂ ਬੇਨਿਯਮੀਆਂ ਤੋਂ ਜਾਣੂ ਕਰਵਾਓ।

6) "ਗੁਆਚੇ ਦੀ ਭਾਲ" ਸੰਬੰਧੀ ਇਸ਼ਤਿਹਾਰ ਲਿਖੋ। (16 ਅੰਕ)

**ਭਾਗ-ਸ**

7) ਸ਼ਬਦ ਜੋੜਾਂ ਦੇ ਨਿਯਮਾਂ ਦਾ ਉਲੇਖ ਕਰੋ।

8) ਗੁਰਮੁਖੀ ਲਿਪੀ ਦੀਆਂ ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ ਸਪੱਸ਼ਟ ਕਰੋ। (16 ਅੰਕ)

FOR GAP YEAR STUDENTS (2023-24).

Paper Code: 9426

| Programme | Exam Code | Course Code |
|---|---|---|
| Bachelor of Arts | 121204 | BARL-4421 |
| Bachelor of Science (Non-Medical) | 121304 | BSNL-4421 |
| Bachelor of Science (Medical ) | | BSML-4421 |
| Bachelor of Science (Economics) | | BECL-4421 |
| Bachelor of Science (Computer Science ) | | BCSL-4421 |
| Bachelor of Commerce | 121104 | BCRL-4421 |
| Bachelor of Business Administration | 121704 | BBRL-4421 |

**Semester- IV**
**Course Title: Punjabi (Compulsory)**
**(160)**

**Time Allowed: 3 Hours** **Max Marks: 40**

ਨੋਟ: ਕੁੱਲ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ ਜ਼ਰੂਰੀ ਹਨ। ਹਰੇਕ ਭਾਗ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ ਲਾਜ਼ਮੀ ਹੈ।ਹਰ ਪ੍ਰਸ਼ਨ ਦੇ ਬਰਾਬਰ (8) ਅੰਕ ਹਨ। ਪੰਜਵਾਂ ਪ੍ਰਸ਼ਨ ਕਿਸੇ ਵੀ ਭਾਗ ਵਿਚੋਂ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ।

## ਭਾਗ–ੳ

1) "ਪਗਡੰਡੀਆਂ" ਸਵੈਜੀਵਨੀ ਦਾ ਵਿਸ਼ਾ–ਵਸਤੂ ਲਿਖੋ।

2) "ਪਗਡੰਡੀਆਂ" ਸਵੈਜੀਵਨੀ ਦਾ ਸਾਰ ਸੰਖੇਪ ਵਿੱਚ ਆਪਣੇ ਸ਼ਬਦਾਂ ਵਿੱਚ ਲਿਖੋ।

## ਭਾਗ–ਅ

3) "ਫ਼ਾਸਲੇ" ਨਾਟਕ ਦਾ ਵਿਸ਼ਾ–ਵਸਤੂ ਕੀ ਹੈ? ਸਪੱਸ਼ਟ ਕਰੋ।

4) "ਫ਼ਾਸਲੇ" ਨਾਟਕ ਦੀਆਂ ਨਾਟਕੀ ਜੁਗਤਾਂ ਬਾਰੇ ਚਰਚਾ ਕਰੋ।

## ਭਾਗ–ਏ

5) ਪੰਜਾਬ ਸਰਕਾਰ ਦੇ ਮੁੱਖ ਚੋਣ ਅਫ਼ਸਰ ਨੂੰ ਇੱਕ ਚਿੱਠੀ ਰਾਹੀਂ ਆਪਣੇ ਪਿੰਡ ਵਿੱਚ ਚੋਣਾਂ ਦਰਾਨ ਹੋਈਆਂ ਬੇਨਿਯਮੀਆਂ ਤੋਂ ਜਾਣੂ ਕਰਵਾਓ।

6) "ਗੁਆਚੇ ਦੀ ਭਾਲ" ਸੰਬੰਧੀ ਇਸ਼ਤਿਹਾਰ ਲਿਖੋ।

## ਭਾਗ–ਸ

7) ਸ਼ਬਦ ਜੋੜਾਂ ਦੇ ਨਿਯਮਾਂ ਦਾ ਉਲੇਖ ਕਰੋ।

8) ਗੁਰਮੁਖੀ ਲਿਪੀ ਦੀਆਂ ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ ਸਪੱਸ਼ਟ ਕਰੋ।

**Paper Code: 4103**

| Programme | Exam Code | Course Code |
|---|---|---|
| Bachelor of Arts | 121204 | BARL-4431 |
| Bachelor of Science (Non-Medical) | 121304 | BSNL-4431 |
| Bachelor of Science (Medical) | | BSML-4431 |
| Bachelor of Science (Economics) | | BECL-4431 |
| Bachelor of Science (Computer Science) | | BCSL-4431 |
| Bachelor of Commerce | 121104 | BCRL-4431 |
| Bachelor of Business Administration | 121704 | BBRL-4431 |

**Semester- IV**

**Course Title: Punjab History and Culture**

**(30)**

**Time Allowed: 3 Hours** **Max Marks: 80**

**Note: Attempt five question, selecting at least one question from each section in 1000 words and the fifth question may be selected from any of the four section. Each question carries 16 marks.**

## Section-I

1. What contribution was made by Guru Har Gobind ji in the transformation of Sikhism?

2. What were the causes of martyrdom of Guru Teg Bahadur Ji?

## Section-II

3. Discuss the main principles and significance of Khalsa Panth.
4. Discuss the circumstances which led to the creation of Khalsa in 1699.

## Section-III

5. Explain the achievements of Banda Singh Bahadur.
6. Write a detailed note on Ahulwalia Misl and Ramgarhia Misl.

## Section-IV

7. Write a note on Baisakhi and Diwali.
8. Discuss the military administration under Maharaja Ranjit Singh.

**Hindi Version**

## सैक्शन–1

1. सिख धर्म के परिवर्तन में गुरु हर गोबिंद जी का क्या योगदान था?
2. गुरु तेग बहादुर जी की शहादत के क्या कारण थे?

## सैक्शन–2

3. खालसा पंथ के प्रमुख सिद्धांतों और महत्व की चर्चा कीजिए।
4. उन परिस्थितियों की चर्चा कीजिए जिनके कारण 1699 में खालसा का निर्माण हुआ।

## सैक्शन–3

5. बंदा सिंह बहादुर की उपलब्धियों का वर्णन कीजिए।
6. अहलूवालिया मिसल और रामगढ़िया मिसल पर एक विस्तृत टिप्पणी लिखिए।

## सैक्शन–4

7. बैसाखी और दीवाली पर एक नोट लिखिए।
8. महाराजा रणजीत सिंह के अधीन सैन्य प्रशासन की चर्चा कीजिए।

Paper Code: 4104

| Programme | Exam Code | Course Code |
|---|---|---|
| Bachelor of Arts | 121204 | BARL -4212 |
| Bachelor of Science (Medical) | 121304 | BSML -4212 |
| Bachelor of Science (Non-Medical) | | BSNL -4212 |
| Bachelor of Science (Computer Science) | | BCSL -4212 |
| Bachelor of Science (Economics) | | BECL -4212 |
| Bachelor of Commerce | 121104 | BCRL -4212 |
| Bachelor of Business Administration | 121704 | BBRL -4212 |

## Semester - IV

## Course Title: English (Compulsory)

**Time Allowed: 3 Hours** **Max Marks: 80**

### SECTION-A

**Q1) Attempt any TEN questions. Each question carries 2 marks (10X2= 20)**

a) Put in *at, on or in.*

I've been invited to a wedding _____ 14 February.

b) Read the situation and make sentence using just *in time.*

A child ran into the road in front of your car. You saw the child at the last moment. (manage / stop)

c) Use *in, at or on.*

Where's the label? _____

d) Complete the sentences. Use *in, at or on + the following*:

| The Plane | Prison |
|---|---|

Some people are _____ for crimes that they did not commit.

e) Put in *to/at/in/into* where necessary. If no preposition is necessary, leave the space empty.

I'm tired. Let's go _____ home now.

f) Write sentences about places you have been to. *Use I've been to / I've never been to + the words in bracket.*

(never) _____

g) Write sentences using *got + into / out of / on / off.*

You were walking home. A friend passed you in her car. She saw you, stopped and offered you a lift. She opened the door.

What did you do? _____

h) Complete the sentences using *by.*

Carl won the race. He was five metres in front of the other runners.

Carl_____

i) Complete the sentences with the correct *preposition.*

There are some differences _____ British and American English.

j) Complete the sentences using an *adjective + preposition.* Choose from:

| | |
|---|---|
| Excited | Nervous |

Are you _____ the exam?

k) Complete the second sentence so that it means the same as the first.

There were lots of tourists in the streets. The streets were crowded ____

l) Which is correct?

i. Can you explain this word to me?

ii. Can you explain me this word?

m) Put in the correct preposition after *care.* If no preposition is necessary, leave the space empty.

Who's going to take care_____ you when you are old?

n) Complete the sentence with *look for or look after.* Use the correct form of look *(looks/ looked/looking).*

I _____ for my keys, but I couldn't find them anywhere.

o) Complete the sentences using *hear or heard + a preposition (about/of/from).*

I'm surprised you haven't _____her. She's quite famous.

## SECTION – B

Q2) **Attempt any one essay in about 400 words.** **(1x10=10)**

a) Does fashion industry needs to change?

OR

b) Is hunting an immoral act?

**Q3) Give a single word for the phrases given below (any 5) (5x2=10)**

a) Government of the people, for the people, and by the people
b) The right of self-government
c) A man whose wife is dead
d) To run away with lover in order to get married secretly
e) Able to read
f) Fit for food
g) That which cannot be conquered
h) Unable to die

## SECTION – C

**Q4) Give words that are similar in meaning:** **(5x2=10)**

a) To become smaller
b) The process of bringing water to agricultural land
c) Regions or areas
d) To use up something completely
e) Needing many years to develop

**Q5) Fill in the blanks by choosing the appropriate word: (5x2=10)**

| Fertile | Collapsed | Disrupt | Roots | Deteriorated | Arid |
|---|---|---|---|---|---|

a) Irrigation can change _____ land into protective farmland.
b) Mayan history shows how the pressure of human populations can _____ the natural ecology of a region and make it unlivable.
c) Even though the earthquake was not very strong, some older buildings _____ and many others were badly damaged.
d) The _____ of this plant do not reach deep into the soil. That's why it will not grow in regions with little rainfall.
e) Weather forecasters are advising motorists not to drive today because conditions on the roads have _____ rapidly in the last two hours.

## SECTION – D

**Q6) Attempt any three questions in about 200 words each. (3x5=15)**

a) Explore the theme of control and power. Who seems to have control at different points in the poem *Porphyria's Lover.*

b) Explore the symbolism of the "School," "Grain," and "Setting Sun." What might each represent in the poem *Because I Could Not Stop For Death.*

c) Why does Frost repeat the line "And miles to go before I sleep"? What effect does this repetition have on the poem's ending and its meaning in the poem *Stopping by Woods on A Snowy Evening?*

d) What does the poem reveal about human expectations after death in the poem *Ah! Are You Digging on my Grave?*

e) Analyse the meaning of the final line: "The only emperor is the emperor of ice-cream." in the poem *Emperor of Ice-Cream.*

**Q7) Explain any one the following with reference to the context in about 250 words. (1x5=5)**

*"Because I could not stop for Death –*
*He kindly stopped for me –*
*The Carriage held but just Ourselves –*
*And Immortality"*

*OR*

*"Mistress, I dug upon your grave*
*To bury a bone, in case*
*I should be hungry near this spot*
*When passing on my daily trot.*
*I am sorry, but i quite forgot*
*It was your resting-place."*