Paper Code: 5101

Programme	Exam Code	Course Code
Bachelor of Arts	103205	BARL-5421
Bachelor of Science (Medical)	103305	BSML-5421
Bachelor of Science (Non-Medical)		BSNL-5421
Bachelor of Science (Computer Science)		BCSL-5421
Bachelor of Science (Economics)		BECL-5421
Bachelor of Commerce	108505	BCRL-5421
Bachelor of Business Administration	105405	BBRL-5421

Semester-V

Course Title: Punjabi (Compulsory)

(170)

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

ਨੋਟ : ਪ੍ਰਸ਼ਨ ਪੱਤਰ ਦੇ ਚਾਰ ਸੈਕਸ਼ਨ ਹਨ । ਹਰ ਸੈਕਸ਼ਨ ਵਿੱਚ ਦੋ ਪ੍ਰਸ਼ਨ ਪੁੱਛੇ ਜਾਣਗੇ । ਵਿਦਿਆਰਥੀ ਨੇ ਕੁੱਲ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰਨੇ ਹਨ । ਹਰ ਸੈਕਸ਼ਨ ਵਿੱਚੋਂ ਇੱਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ ਲਾਜ਼ਮੀ ਹੈ। ਪੰਜਵਾਂ ਪ੍ਰਸ਼ਨ ਕਿਸੇ ਵੀ ਸੈਕਸ਼ਨ ਵਿੱਚੋਂ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ । ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ 8 ਅੰਕ ਹਨ।

ਸੈਕਸ਼ਨ –।

1. "ਨਿਊਯੀਅਰ" ਕਹਾਣੀ ਦਾ ਸਾਰ ਲਿਖੋ ।
2. "ਖੂਹ ਖਾਤੇ" ਕਹਾਣੀਦਾ ਵਿਸ਼ਾ ਸਪਸ਼ਟ ਕਰੋ ।

ਸੈਕਸ਼ਨ –II

3. 'ਏਹੁ ਹਮਾਰਾ ਜੀਵਣਾ' ਨਾਵਲ ਦਾ ਵਿਸ਼ਾ ਸਪਸ਼ਟ ਕਰੋ ।
4. 'ਏਹੁ ਹਮਾਰਾ ਜੀਵਣਾ' ਨਾਵਲ ਦੀਆਂ ਬਿਰਤਾਂਤਕ ਜੁਗਤਾ ਬਾਰੇ ਜਾਣਕਾਰੀ ਦਿਓ ।

ਸੈਕਸ਼ਨ –III

5. ਕਿਸੇ ਇੱਕ ਵਿਸ਼ੇ 'ਤੇ ਲਗਭਗ 200 ਸ਼ਬਦਾਂ ਵਿੱਚ ਪੈਰ੍ਹੇ ਰਚਨਾ ਲਿਖੋ।
   (ੳ) ਵੱਧ ਰਿਹਾ ਪ੍ਰਦੂਸ਼ਣ
   (ਅ) ਮਹਿੰਗਾਈ
   (ੲ) ਪਰਵਾਸ
6. ਹੇਠਾਂ ਦਿੱਤੇ ਸਰਲ ਅੰਗਰੇਜ਼ੀ ਪੈਰ੍ਹੇ ਦਾ ਪੰਜਾਬੀ ਵਿੱਚ ਅਨੁਵਾਦ ਕਰੋ ।

Games and sports are essential parts of education. Education is the incomplete without them. Every boy and girl ought to take a part in one or the other game. Sports strengthen our body and make us active. They keep us healthy. They teach us several lessons for example, punctuality, discipline, patience and hopefulness. Those boys who keep away from sports often remain sick.

ਸੈਕਸ਼ਨ –IV

7. ਨਾਂਵ ਵਾਕੰਸ਼ ਦੀ ਪਰਿਭਾਸ਼ਾ ਦਿੰਦਿਆਂ ਇਸ ਦੀ ਸਥਾਪਤੀ ਦੇ ਅਧਾਰਾਂ ਬਾਰੇ ਜਾਣਕਾਰੀ ਦਿਓ ।
8. ਪੰਜਾਬੀ ਵਿੱਚ ਵਾਕਤਮਕ ਜੁਗਤ ਮੇਲ ਬਾਰੇ ਜਾਣਕਾਰੀ ਦਿਓ ।

Paper Code: 5102

Programme	Exam Code	Course Code
Bachelor of Arts	103205	BARL-5031
Bachelor of Science (Medical)	103305	BSML-5031
Bachelor of Science (Non-Medical)		BSNL-5031
Bachelor of Science (Computer Science)		BCSL-5031
Bachelor of Science (Economics)		BECL-5031
Bachelor of Commerce	108505	BCRL-5031
Bachelor of Business Administration	105405	BBRL-5031

Semester- V

Course Title: Basic Punjabi

(50)

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

ਨੋਟ:- ਪ੍ਰਸ਼ਨ ਪੱਤਰ ਦੇ ਚਾਰ ਸੈਕਸ਼ਨ ਹਨ। ਹਰੇਕ ਸੈਕਸ਼ਨ ਵਿੱਚੋਂ ਇੱਕ ਪ੍ਰਸ਼ਨ ਕਰਨਾ ਜ਼ਰੂਰੀ ਹੈ। ਪੰਜਵਾਂ ਪ੍ਰਸ਼ਨ ਕਿਸੇ ਵੀ ਸੈਕਸ਼ਨ ਵਿੱਚੋਂ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ। ਹਰੇਕ ਪ੍ਰਸ਼ਨ 8 ਅੰਕਾਂ ਦਾ ਹੈ।

ਸੈਕਸ਼ਨ-I

1. ਲੋਕ ਵਾਰਤਕ ਬਿਰਤਾਂਤ ਬਾਰੇ ਜਾਣਕਾਰੀ ਦਿਉ? (8)
2. ਸਾਹਿਤ ਅਤੇ ਲੋਕ ਸਾਹਿਤ ਬਾਰੇ ਵਿਸਥਾਰਪੂਰਵਕ ਨੋਟ ਲਿਖੋ? (8)

ਸੈਕਸ਼ਨ–II

3. ਸੁਹਾਗ ਦੀ ਪਰਿਭਾਸ਼ਾ ਦਿੰਦਿਆਂ ਇਸ ਤੇ ਨੋਟ ਲਿਖੋ? (8)
4. ਸਿੱਠਣੀਆਂ ਕਿਸ ਨੂੰ ਕਿਹਾ ਜਾਂਦਾ ਹੈ? (8)

ਸੈਕਸ਼ਨ–III

5. ਝੂੰਮਰ ਤੇ ਨੋਟ ਲਿਖੋ? (8)
6. ਭੰਗੜਾ ਬਾਰੇ ਜਾਣਕਾਰੀ ਦਿਉ? (8)

ਸੈਕਸ਼ਨ–IV

7. ਲੋਕ ਕਲਾਵਾਂ ਦੀ ਪਰਿਭਾਸ਼ਾ ਤੇ ਕਿਸਮਾਂ ਬਾਰੇ ਜਾਣਕਾਰੀ ਦਿਉ? (8)
8. ਲੋਕ ਖੇਡਾਂ ਦੀ ਪਰਿਭਾਸ਼ਾ ਤੇ ਕਿਸਮਾਂ ਤੇ ਨੋਟ ਲਿਖੋ? (8)

Paper Code: 5103

Programme	Exam Code	Course Code
Bachelor of Arts	103205	BARL-5431
Bachelor of Science (Medical)	103305	BSML-5431
Bachelor of Science (Non -Medical)		BSNL-5431
Bachelor of Science (Computer Science)		BCSL-5431
Bachelor of Science (Economics)		BECL-5431
Bachelor of Commerce	108505	BCRL-5431
Bachelor of Business Administration	105405	BBRL-5431

Semester - V

Course Title: Punjab History and Culture

Examination Time: 3 Hours **Theory: 40**

Note: Candidates are required to attempt five questions in 600 words, selecting atleast one question from each section. The Fifth question may be attempted from any section. Each question carries 8 marks.

Section - A

1. Discuss the main reforms affected by John Lawrence as chief commissioner of Punjab.
2. Discuss the Events of First Anglo - Sikh war.

Section - B

3. Describe the Education Policy in Punjab from 1849 up to 1947.
4. What do you know about the agriculture development in Punjab under British rule?

Section - C

5. Trace the origin and programme of Singh Sabha Movement in Punjab.
6. Discuss the Ghadar Movement in Punjab.

Section - D

7. Mention the role played by Punjab in Non Co operation Movement in 1920-22.
8. Explain Nankana Holocaust and Jaitu Morcha.

(Hindi Version)

यूनिट-I

1. पंजाब के मुख्य आयुक्त के रूप में जॉन लॉरेंस द्वारा प्रभावित प्रमुख सुधारों की चर्चा करें।
2. प्रथम आंग्ल-सिख युद्ध की घटनाओं पर चर्चा करें।

यूनिट-II

3. पंजाब में 1849 से 1947 तक की शिक्षा नीति का वर्णन करें।
4. ब्रिटिश शासन के अधीन पंजाब में कृषि विकास के बारे में आप क्या जानते हैं?

यूनिट-III

5. पंजाब में सिंह सभा आंदोलन की उत्पत्ति और कार्यक्रम का पता लगाएँ।
6. पंजाब में गदर आंदोलन पर चर्चा करें।

यूनिट-IV

7. 1920-22 में असहयोग आंदोलन में पंजाब द्वारा निभाई गई भूमिका का उल्लेख करें।
8. ननकाना नरसंहार और जैतू मोर्चा की व्याख्या करें।

C.O.E Office (Morn) KMV - II
4/12/24 (

Paper Code: 5104

Programme	Exam Code	Course Code
Bachelor of Arts	103205	BARL-5212
Bachelor of Science (Medical)	103305	BSML-5212
Bachelor of Science (Non-Medical)		BSNL-5212
Bachelor of Science (Computer Science)		BCSL-5212
Bachelor of Science (Economics)		BECL-5212
Bachelor of Commerce	108505	BCRL-5212
Bachelor of Business Administration	105405	BBRL-5212

Semester-V

Course Title: English (Compulsory)

(180)

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

Section A

1. Answer any five questions in 50 words each. Each question carries 2 marks.

i. What is the role of Dr. Jim Bayllis in "All MY SONS" BY Arthur miller?

ii. What is the significance of the setting in "All My Sons"?

iii. Discuss very briefly the relationship between Chris and Ann in "All My Sons".

iv. Bring out the unique characteristics attributed to the wife in the poem 'The Portrait' by Robert Graves.

v. What is the theme of the poem 'OZYMANDIAS' by P.B. Shelley.

vi. Why does Wordsworth regard the world as a sordid boon in his poem "THE WORLD IS TOO MUCH WITH US"?

Section B

2. Answer two questions in 250 words each choosing from the prescribed play. Each question carries 5 marks.

i. Discuss the theme of ALL MY SONS by Arthur Miller.

ii. What is the chronological order of events in ' ALL MY SONS' by Arthur Miller.

iii. Compare the characters of Chris and Joe in All My Sons with reference to moral values and idealism.

iv. Write a note on the women characters in ALL MY SONS by Arthur Miller.

Section C

3. Answer two questions in 250 words each from the book of poems. Each question carries 5 marks.

i. In "She Walks in Beauty" the poet tries to invest the lady with multiple beauty. Discuss

ii. The poem 'In Memorium' deals with the spiritual crisis that has come to afflict modern life. Elaborate.

iii. What is theme of the poem 'Night of Scorpion'.

iv. Discuss the title of the poem 'Mirror'.

Section D

4. Sanjay electricals requires a salesman for their company. Candidate should be graduate with minimum two years selling experience. Age should not exceed 28 years. Apply within two weeks with resume to sa54elec @gmail.com. (5)

OR

Montessorie High School Shimla requires hostel warden with minimum 5 years experience in a convent school affiliated to ICSE board. Apply with resume within ten days @mhhs14simla (5)

5. Write a letter to Municipal Corporation regarding the potholes in your colony leading to increased accidents and cases of theft in the area. (5)

OR

Write a letter to the Editor of THE HINDUSTAN TIMES regarding the increasing drug menance in Punjab. (5)

Paper Code: 5105

Programme	Exam Code	Course Code
Bachelor of Arts	103205	BARM-5333 (I)
Bachelor of Science(Non-Medical)	103305	BSNM-5333 (I)
Bachelor of Science (Economics)		BECM-5333 (I)
Bachelor of Science (Computer Science)		BCSM-5333 (I)

Semester-V

Course Title: Mathematics (Dynamics)

(50)

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

The question paper consists of four sections (A-D). Each section carries two questions. Candidates are required to attempt five questions by selecting at least one question from each section. The fifth question may be attempted from any section. Each question carries 8 marks.

SECTION-A

1. (a) Two particles 100 m apart are approaching each other. Particle A has velocity of 5 m/sec and its acceleration is 2 m/sec^2. Particle B has a velocity of 20 m/sec and is decelerating at 2 m/sec^2. At the instant

they meet how far will each have travelled from its initial position? (4 Marks)

(b) A heavy particle is projected vertically upwards with an initial velocity of u m/sec. The difference in times when it passes a point 100 metres above the point of projection is $\frac{30}{7}$ seconds. Find u. (4 Marks)

2. (a) State Newton's second law of motion and derive the fundamental equation of dynamics. (4 Marks)

(b) Two bodies of masses 3 kg and 2 kg are hung to the ends of a string passing over a smooth pulley. At the end of 5 seconds the string breaks. How much higher the 2 kg mass will go? (4 Marks)

SECTION-B

3. (a) A body moves down a smooth inclined plane under the action of gravity alone, discuss its motion. (4 Marks)

(b) A particle starts with a velocity u and moves under a retardation equal to k times the space described. Show that the distance moved before it comes to rest is $\frac{u}{\sqrt{k}}$. (4 Marks)

4. (a) Define Simple Harmonic Motion and prove that it is periodic. (4 Marks)

(b) A particle is performing S.H.M. between two points A and B. If the period of oscillation is 2π, show that the velocity at any point P is mean proportional between AP and BP. (4 Marks)

SECTION-C

5. (a) The maximum height of a projectile is h and angle of projection is α. Find out the difference of time when it is at a height of $h\,sin^2\alpha$. (4 Marks)

(b) Two seconds after its projection, a projectile is travelling in a direction inclined at 30° to the horizontal. After one more second, it is travelling horizontally. Determine the magnitude and direction of its initial velocity. (4 Marks)

6. (a) Define simple pendulum and discuss its motion.

(b) If l is the length of the string and v be the velocity of the bob in a conical pendulum, show that the inclination θ of the string to the vertical is given by $gl\,sin^2 2\theta = v^2\,cos\theta$. (4 Marks)

SECTION-D

7. (a) Define Work, power and energy and discuss their units. (4 Marks)

(b) A particle of mass m is moving with S.H.M. of period T and amplitude α Find the work done by the force of

attraction when the particle moves from the mean position to an extreme position. (4 Marks)

8. (a) An engine working at the rate of H units is pulling a train up an incline of 1 in n at a steady of v m/sec. If M is the total mass of the train, find the average frictional force. (4 Marks)

(b) State and prove the principle of work and energy. (4 Marks)

Programme	Exam Code	Course Code
Bachelor of Arts	103205	BARM-5333 (II)
Bachelor of Science(Non-Medical)	103305	BSNM-5333 (II)
Bachelor of Science (Economics)		BECM-5333 (II)
Bachelor of Science (Computer Science)		BCSM-5333 (II)

Semester-V

Course Title: Mathematics (Number Theory)

(50)

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

The question paper Consist of four section (A-D). Each section carries two question. Candidates are required to attempt five questions by selecting at least one question from each section. The fifth question may be attempted from any section. Each question carries 8 marks.

SECTION-A

1. (a) State and prove division algorithm (4 Marks)

   (b) Show that 4 does not divide m^2+2 for any integer m. (4 Marks)

2. (a) If $(a,b)=1$ and c divides $(a+b)$, then prove that $(c,a)=(c,b)=1$. (4 Marks)

   (b) Find the g.c.d. of 7200 and 3132 and express it in the form of $7200x + 3132y$. (4 Marks)

SECTION-B

3. (a) Prove that the linear diophantine equation $ax + by = c$ is solvable iff $(a,b) = (a,b,c)$. (4 Marks)

   (b) Find all solutions in positive integers of the equation $56x + 72y = 40$. (4 Marks)

4. (a) State and prove the fundamental theorem of arithmetic. (4 Marks)

   (b) Show that the only prime of the form $n^3 - 1$ is 7. (4 Marks)

SECTION-C

5. (a) Solve $140x \equiv 133 (\text{mod } 301)$. (4 Marks)

   (b) Solve $x \equiv 2 (\text{mod } 3)$, $x \equiv 3 (\text{mod } 5)$, $x \equiv 2 (\text{mod } 7)$. (4 Marks)

6. (a) State and prove Fermat's theorem. (4 Marks)

   (b) Show that 19 is prime using converse of Wilson's theorem. (4 Marks)

SECTION-D

7. (a) For even integer n, prove that $\varphi(2n) = 2\varphi(n)$. (4 Marks)

   (b) Find the number and sum of divisors of 540. (4 Marks)

8. (a) State and prove Mobius inversion formula. (4 Marks)

   (b) If x and y are real numbers, then prove that

   $$[x] + [y] \leq [x + y]$$ (4 Marks)

C.O.E office [redacted] 10/12/24 RMV=II
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Paper Code: 5107

Programme	Exam Code	Course Code
Bachelor of Arts	103205	BARM-5134
Bachelor of Science (Economics)	103305	BECM-5134
Bachelor of Science (Computer Science)	103305	BCSM-5134

Semester-V

Course Title: Computer Science (Database Management System)

(30)

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

CANDIDATES ARE RQUIRED TO ATTEMPT FIVE QUESTIONS SELECTING ATLEAST ONE QUESTION FROM EACH SECTION. THE FIFTH QUESTION MAY BE ATTEMPTED FROM ANY SECTION. EACH QUESTION CARRIES 10 MARKS.

SECTION A

1. WHAT IS DBMS.EXPLAIN ITS COMPONENTS. (10)
2. EXPLAIN NETWORK MODEL IN DETAIL. (10)

SECTION B

3. EXPLAIN 3NF AND BCNF FORM IN DETAIL. (10)
4. HOW TO PROTECT DATABASE. (10)

SECTION C

5. EXPLAIN VARIOUS FEATURES OF ORACLE. (10)
6. EXPLAIN DDL AND DML STATEMENTS. (10)

SECTION D

7. EXPLAIN ANY 5 IMPLICIT CURSORS. (10)
8. EXPLAIN THE CONCEPT OF FUNCTIONS. (10)

Paper Code: 5108

Programme	Exam Code	Course Code
Bachelor of Arts	103205	BARM-5124
Bachelor of Science (Economics)	103305	BECM-5124

Semester-V

Course Title: Computer Applications (Vocational) (Internet and Web Designing)

(30)

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

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 10 MARKS.

SECTION A

1. EXPLAIN EVOLUTION OF INTERNET (10)
2. EXPLAIN STRUCTURE OF EMAIL (10)

SECTION B

3. EXPLAIN ADVANTAGES AND LIMITATIONS OF HTML (10)
4. HOW TO DO FORMATTING IN HTML (10)

SECTION C

5. EXPLAIN ADVANTAGES OF CSS (10)
6. HOW TO SELECT COLORS AND BACKGROUND IN CSS (10)

SECTION D

7. EXPLAIN VARIOUS FEATURES OF JAVASCRIPT (10)
8. EXPLAIN THE CONCEPT OF ARRAYS IN JAVA SCRIPT (10)

Paper Code: 5109

Programme	Exam Code	Course Code
Bachelor of Arts	103205	BARL-5175
Bachelor of Science (Economics)	103305	BECL-5175

Semester-V

Course Title: Economics (Economics of Development)

(30)

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

Note: The paper consist of four sectionss- A, B,C and D. Candidates are required to attempt five questions, selecting at least one from each section. The fifth question may be attempted from any section. Each question carries 16 marks.

Section-A

1. Critically examine Lewis's model of the unlimited supply of surplus labour.
2. Discuss the economic and non-economic determinants of economic development.

Section-B

3. Critically evaluate the Classical model of development.
4. Explain Harrod-Domar's model of growth.

Section-C

5. Discuss the Rosenstein Rodan's big push theory of growth.
6. Explain the stage of growth given by Rostow.

Section-D

7. Explain the factors that determine the choice of technique. Briefly discuss the importance of the intermediate technique.
8. Elaborate the major objectives and strategies of economic planning.

Paper Code: 5111

Programme	Exam Code	Course Code
Bachelor of Arts	103205	BARL-5026
Bachelor of Science	103305	BECL-5026

Semester – V

Course Title: Banking (Quantitative Aptitude-I)

Time: 2:00 Hours **Theory: 80**

Note: Candidates are required to attempt forty (40) MCQs, selecting at least eight (8) MCQs from each section. The remaining eight (8) MCQs may be attempted from any section. Each question carries 2 marks.

SECTION - A

1. Solve the value $4-\frac{5}{1+\frac{1}{3+\frac{1}{2+\frac{1}{4}}}}$.

a) $\frac{1}{7}$
b) $\frac{1}{9}$
c) $\frac{1}{8}$
d) $\frac{2}{8}$

2. Solve $\frac{1}{15}+\frac{1}{35}+\frac{1}{63}+\frac{1}{99}+\frac{1}{143}$.

a) 0.12
b) 0.13
c) 0.11
d) 0.012

3. $\frac{x}{y}=\frac{6}{5}$ find $\frac{x^2+y^2}{x^2-y^2}$.

a) $\frac{62}{11}$
b) $\frac{61}{11}$
c) $\frac{63}{11}$
d) $\frac{68}{11}$

4. The greatest number of 4 digit which is divisible by 15,25, 40,75.

a) 1800
b) 9600
c) 8600
d) 7600

5. Find the L.C.M. OF the 16, 24, 36, and 54.

a) 432
b) 400
c) 431
d) 402

6. The H.C.F of 2 numbers is 11 and their L.C.M is 693. If one of the numbers is 77, find the other.

a) 88
b) 77
c) 89
d) 99

7. Solve $56\div14\times4-316+x^2=100$

a) 30
b) 25
c) 20
d) 22

8. What value will replace the question mark in the following equation?
$4\frac{1}{2} + 3\frac{1}{2} + ? + 2\frac{1}{2} = 13\frac{2}{5}$.
   a) $3\frac{2}{5}$
   b) $4\frac{2}{5}$
   c) $2\frac{9}{10}$
   d) $6\frac{3}{12}$
9. Complete the series 3, 8, 15, ____ 35 .
   a) 19
   b) 21
   c) 24
   d) 28
10. Complete the series missing frequency: 625, 5, 125, 25, 25, ? 5.
   a) 5
   b) 25
   c) 125
   d) 625
11. Solve the value $\frac{4+4\times18-6-8}{123\times6-146\times5}$ =?
   a) 1
   b) 2
   c) 6.65
   d) 7.75
12. Find the largest number which divides 62, 132 and 237 to leave the same remainder in each case.
   a) 34
   b) 35
   c) 30
   d) 29
13. Simplify:

$$\frac{0.72 \times 0.72 \times 0.72 - 0.39 \times 0.39 \times 0.39}{0.72 \times 0.72 + 0.72 \times 0.39 + 0.39 \times 0.39}$$

   a) 0.333
   b) 0.33
   c) 0.3333
   d) 0.3334
14. $107\times107 + 93\times93$ =?
   a) 19578
   b) 19418
   c) 20098
   d) 21908
15. If a = 4.36, b = 2.39, c = 1.97, then the value of a^3-b^3-c^3- 3abc is
   a) 3.94
   b) 2.39
   c) 0
   d) 1

SECTION – B

16. Sulekha bought 36 kg of sugar for Rs. 1,040. She sold it at a profit equal to the selling price of 10 kg of it. What is the selling price (in Rs) for 5 kg of sugar?
   a) 200
   b) 215
   c) 220
   d) 235

17. The average salary of the entire staff in Reliance Company is Rs.15000 per month. The average salary of officers is Rs.45000 per month and that of non-officers is Rs.10000 per month. If the number of officers is 20 then find the number of non-officers in the Reliance Company.
    a) 160
    b) 120
    c) 60
    d) 180
18. A bank provides a loan of ₹55,000 to a shopkeeper at a 5% compound rate of interest (Compounded annually). After 2 years the amount to be deposited by the shopkeeper is:
    a) ₹62,526.50
    b) ₹65,259.75
    c) ₹60,637.50
    d) ₹55,825.75
19. The average of 45 numbers is 150. Later it is found that a number 46 is wrongly written as 91, then find the correct average.
    a) 151
    b) 147
    c) 149
    d) 153
20. On a certain sum of money, the compound interest for 2 years is Rs. 304.5 and the simple interest for the same period of time is Rs. 290. The rate of interest per annum:
    a) 9%
    b) 8%
    c) 11%
    d) 10%
21. Average of 12 numbers is 15. If a number 41 is also included, then what will be the average of these 13 numbers?
    b) 16
    c) 18
    d) 19
    e) 17
22. Difference between compound interest and simple interest is Rs. 3375 in 2 years and the rate of interest is 15%. Find the principal amount.
    a) Rs. 100,000
    b) Rs. 150,000
    c) Rs. 160,000
    d) Rs. 200,000
23. If selling price of an article is $\frac{4}{3}$ of its cost price, the profit in the transaction is :
    a) $16\frac{2}{3}\%$
    b) b) $20\frac{1}{2}\%$
    c) c) $25\frac{1}{2}\%$
    d) d) $33\frac{1}{3}\%$
24. The average monthly income of P and Q is Rs. 5050. The average monthly income of Q and R is Rs. 6250 and the average monthly income of P and R is Rs. 5200. The monthly income of P is:
    a) Rs. 3500
    b) b) Rs. 4000
    c) c) Rs. 4050
    d) d) Rs. 5000
25. A man buys a cycle for Rs. 1400 and sells it at a loss of 15%. What is the selling price of the cycle?
    a) Rs. 1090
    b) Rs. 1160
    c) c) Rs. 1190
    d) d) Rs. 1202

26. If the average marks of three batches of 55, 60 and 45 students respectively is 50, 55 and 60, then the average marks of all the students is :
    a) 53.33
    b) 54.68
    c) 55
    d) None of these
27. A sum of Rs. 1600 gives a simple interest of Rs 252 in 2 years and 4 months. The rate of interest per annum is :
    a) 6 %
    b) $6\frac{1}{4}\%$
    c) $6\frac{1}{2}\%$
    d) $6\frac{3}{4}\%$
28. Albert buys 4 horses and 9 cows for Rs. 13,400. If he sells the horses at 10 % profit and the cows at 20 % profit, the he earns a total profit of Rs. 1880. The cost of a horse is:
    a) Rs. 1000
    b) Rs. 2000
    c) Rs. 2500
    d) Rs. 3000
29. Alice suffered a 20% loss by selling the vase at the price of 2880. If she wants to gain a profit of 20%, what should be its selling price?
    a) Rs. 3500
    b) Rs. 4000
    c) Rs. 4320
    d) Rs. 5600
30. A grocer has a sale of Rs. 6435, Rs. 6927, Rs. 6855, Rs. 7230 and Rs. 6562 for 5 consecutive months. How much sale must he have in the sixth month so that he gets an average sale of Rs. 6500?
    a) Rs. 4991
    b) Rs. 5991
    c) Rs. 6001
    d) Rs. 6991

SECTION – C

31. What is Ram's present age, if after 8 years his age will be 10 times his age 10 years back?
    a) 11 years
    b) 21 years
    c) 12 years
    d) 32 years
32. An athlete runs 200 meters race in 24 seconds. His speed is:
    a) 30
    b) 35
    c) 37
    d) None of these
33. 25 men can do a work in 5 days. Find the amount of work done by 5 men in 10 days.
    a) 25%
    b) 30%
    c) 35%
    d) 40%
34. The present age of Kabir is 50 years and that of his wife, Sarah is 40 years. How long ago was the ratio of their ages 3:2?
    a) 20 years
    b) 21 years
    c) 15 years
    d) 30 years

35. 10 men can do a piece of work in 25 days. Find the amount of work done by 35 men in 2.5 days.
a) 25%
b) 35%
c) 45%
d) 55%

36. Walking at 5/6 of its usual speed, a train is 10 minutes too late .Find its usual time to cover the journey.
a) 50
b) 60
c) 70
d) 75

37. The present ratio between the ages of Archana and Diksha is 4 : 3. After 5 years, Archana's age will be 25 years. What is the age of Diksha at present?
a) 12 years
b) 20 years
c) 15 years
d) 22 years

38. A can complete a work in 12 days and B can complete in 8 days. A works for 8 hours every day while B works for 10 hours every day. If A and B together start working 8 hours per day, in how many days will they complete the work?
a) 8 days
b) 60/11 days
c) 39/12 days
d) 15/8 days

39. A Car move at the speed at the speed of 80 km/hr.What is the speed of the car in meters per second?
a) 8
b) 20
c) 25
d) None of these

40. The present ages of three persons, Raj, Rajesh and Ravi is in proportions 4: 7: 9. Eight years ago, the sum of their ages was 56. What is the present age of Ravi?
a) 22 years
b) 43 years
c) 76 years
d) 36 years

41. A and B can finish a piece of work in 30 days, B and C can finish it in 15 days, C and A in 10 days. Time taken by them together to do this work is?
a) 5 days
b) 2 days
c) 7 days
d) 10 day

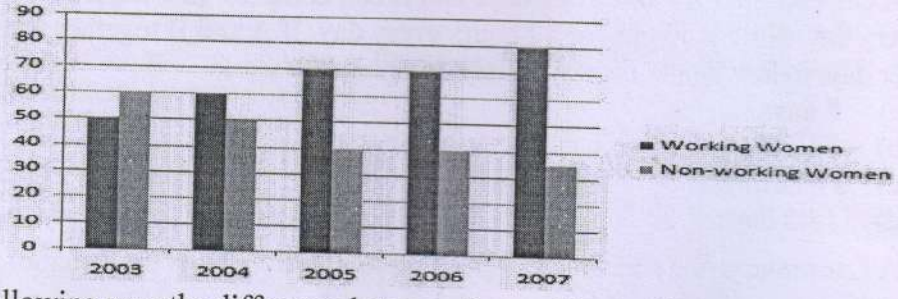
42. In covering a distance of 30 km, Abhay takes 2 hours more than Sameer. If Abhay doubles his speed, then he would take 1 hour less than Sameer. Abhay's speed is:
a) 5 kmph
b) 6 kmph
c) 6.25 kmph
d) 7.5 kmph

43. A father is twice as old as his daughter. If 20 years ago, the age of the father was 10 times the age of the daughter, what is the present age of the father?
a) 40 years
b) 32 years
c) 33 years
d) 45 years

44. A can do a work in 3 days. B can do the same work in 6 days and C can do the same work in 7 days. If they work together, in how many days will they take to complete the work?
    a) 11/10 Days
    b) 15/16 Days
    c) 14/9 Days
    d) 16/7 Days
45. If a person walks at 14 km/hr instead of 10 km/hr, he would have walked 20 km more. The actual distance travelled by him is:
    a) 50 km
    b) 56 km
    c) 70 km
    d) 80 km

SECTION - D

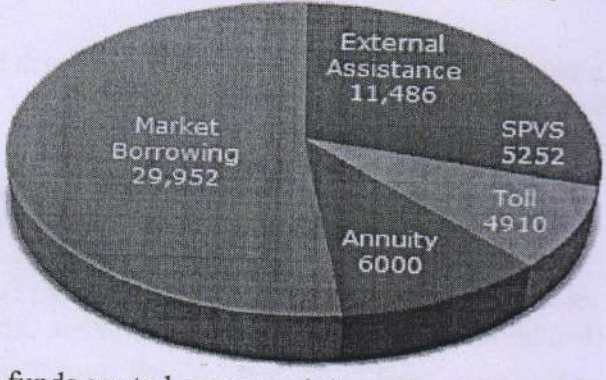
Directions: Study the given bar graph carefully and answer the questions given below:



46. In which of the following year the difference between the working and non-working women was the highest?
    a) 2005
    b) 2007
    c) 2003
    d) 2004

Directions (Questions 47 to51): The following pie-chart shows the sources of funds to be collected by the National Highways Authority of India (NHAI) for its Phase II projects. Study the pie-chart and answers the question that follow.

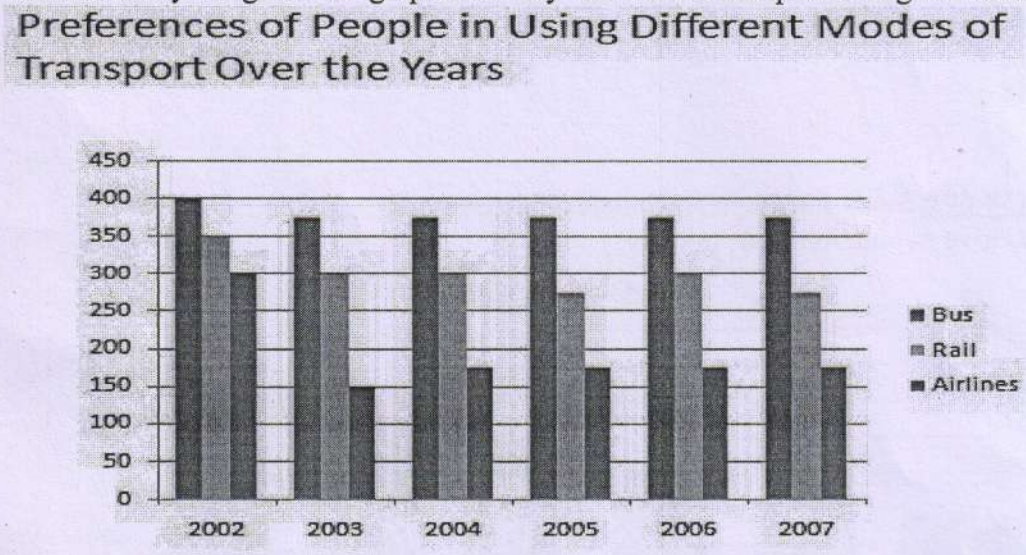
Sources of funds to be arranged by NHAI for Phase II projects (in crores Rs.)



47. Near about 20% of the funds are to be arranged through:
    a) SPVS
    b) External Assistance
    c) Annuity
    d) Market Borrowing
48. If NHAI could receive a total of Rs. 9695 crores as External Assistance, by what percent (approximately) should it increase the Market Borrowing to arrange for the shortage of funds?
    a) 4.5%
    b) 7.5%
    c) 6%
    d) 8%

49. If the toll is to be collected through an outsourced agency by allowing a maximum 10% commission, how much amount should be permitted to be collected by the outsourced agency, so that the project is supported with Rs. 4910 crores?
    a) Rs. 6213 crores
    b) Rs. 5827 crores
    c) Rs. 5401 crores
    d) Rs. 5316 crores
50. The central angle corresponding to Market Borrowing is:
    a) 52°
    b) 137.8°
    c) 187.2°
    d) 192.4°
51. The approximate ratio of the funds to be arranged through Toll and that through Market Borrowing is
    a) 2 : 9
    b) 1 : 6
    c) 3 : 11
    d) 2 : 5

Directions: Study the given bar graph carefully and answer the questions given below:



52. What is the respective ratio of the number of people who preferred to travel by bus to the number of people preferring to travel by rail in the year 2005?
    a) 15:11
    b) 9:7
    c) 7:9
    d) 11:15

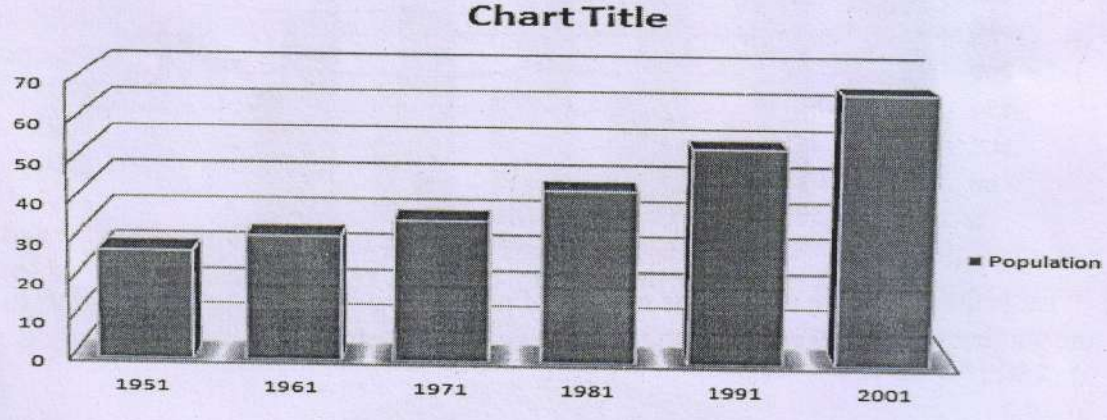
Directions (Questions 53 to57) Study the following table and answer the questions based on it.
Expenditures of a Company (in Lakh Rupees) per Annum Over the given Years.

Year	Item of Expenditure				
	salary	Fuel and Transport	Bonus	Interest on Loans	Taxes
1998	288	98	3.00	23.4	83
1999	342	112	2.52	32.5	108
2000	324	101	3.84	41.6	74
2001	336	133	3.68	36.4	88
2002	420	142	3.96	49.4	98

53. What is the average amount of interest per year which the company had to pay during this period?
    a) Rs. 32.43 lakhs
    b) Rs. 33.72 lakhs
    c) Rs. 34.18 lakhs
    d) Rs. 36.66 lakhs

54. The total amount of bonus paid by the company during the given period is approximately what percent of the total amount of salary paid during this period?
    a) 0.1%
    b) 0.5%
    c) 1%
    d) 1.25%
55. Total expenditure on all these items in 1998 was approximately what percent of the total expenditure in 2002?
    a) 62%
    b) 66%
    c) 69%
    d) 71%
56. The total expenditure of the company over these items during the year 2000 is?
    a) Rs. 544.44 lakhs
    b) Rs. 501.11 lakhs
    c) Rs. 446.46 lakhs
    d) Rs. 478.87 lakhs
57. The ratio between the total expenditure on Taxes for all the years and the total expenditure on Fuel and Transport for all the years respectively is approximately?
    a) 4:7
    b) 10:13
    c) 15:18
    d) 5:8

Directions (58-60): Study the graph and answer the questions:
The bar chart give population data(in crores)



58. The percent increase in population from 1991 to 2001 is:
    a) 24.8 crores
    b) 20 crores
    c) 13.6 crores
    d) 22.9 crores
59. In which census year, the percent increase is highest as compared to that in the previous census year
    a) 1971
    b) 1981
    c) 1991
    d) 2001
60. Per year increase in population from the year 1951 to 2001 is:
    a) 8100000
    b) 7600000
    c) 8900000
    d) 6700000