

28-11-18

Page

Paper Code: 8206 (130)

Programme	Course Code	Exam Code
B.A Sem-I	BARL-1031	103201
B.Sc. (Non-Medical) Sem-I	BSNL-1031	103301
B.Sc.(Medical) Sem-I	BSML-1031	103301
B.Sc.(Eco) Sem-I	BECL-1031	103301
B.Sc.(C.Sc) Sem-I	BCSL-1031	103301
B.Com Sem-I	BCRL-1031	108501
BBA Sem-I	BBRL-1031	105401
B.A (JMC) Sem-I	BJML-1031	108701
B.Sc (FD) Sem-I	BFDL-1031	108601
B.Sc(H.Sc) Sem-I	BHSL-1031	108201
BCA Sem-I	BCAL-1031	107201
B.Sc(IT) Sem-I	BITL-1031	105701
B.Sc(BT) Sem-I	BBTL-1031	107401
B.A(Hons.) in English Sem-I	BOEL-1031	107501
B.Sc (Hons.) Agriculture Sem-I	BACL-1031	108301

Course Title: Basic Punjabi

Time Allowed: 3 Hours

Max Marks: 40

Note:

1. ਕੁਲ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰੋ।
2. ਹਰੇਕ ਭਾਗ ਵਿੱਚੋਂ ਇੱਕ ਪ੍ਰਸ਼ਨ ਲਾਜ਼ਮੀ ਹੈ।
3. ਪੰਜਵਾਂ ਪ੍ਰਸ਼ਨ ਕਿਸੇ ਵੀ ਭਾਗ ਵਿੱਚੋਂ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ।
4. ਹਰੇਕ ਪ੍ਰਸ਼ਨ ਦੇ ਅੱਠ ਅੰਕ ਹਨ।

ਸੈਕਸ਼ਨ-ਏ

1. ਪੈਂਤੀ ਅੱਖਰੀ ਬਾਰੇ ਵਿਸਥਾਰ ਸਹਿਤ ਜਾਣਕਾਰੀ ਦਿੰਦੇ ਹੋਏ ਇਹ ਦੱਸੋ ਕਿ ਇਸ ਸਮੇਂ ਇਸਦੇ ਕਿੰਨੇ ਵਰਨ ਹਨ?
2. ਪੈਰ ਬਿੰਦੀ ਵਾਲੇ ਵਰਨ ਕਿਹੜੇ-ਕਿਹੜੇ ਹਨ? ਇਨ੍ਹਾਂ ਦੀ ਵਰਤੋਂ ਨੂੰ ਉਦਾਹਰਨਾਂ ਸਹਿਤ ਸਪੱਸ਼ਟ ਕਰੋ।

ਸੈਕਸ਼ਨ-ਬੀ

3. ਸੰਯੁਕਤ ਸ਼ਬਦ ਬਣਤਰ ਬਾਰੇ ਜਾਣਕਾਰੀ ਦਿੰਦੇ ਹੋਏ ਕੋਈ ਸੰਯੁਕਤ ਸ਼ਬਦ ਬਣਾ ਕੇ ਲਿਖੋ।
4. ਹੇਠ ਲਿਖੇ ਅਗੇਤਰਾਂ ਦੀ ਵਰਤੋਂ ਨਾਲ ਦੋ-ਦੋ ਸ਼ਬਦ ਬਣਾਉ।
(ੳ) ਉਪ (ਅ) ਅਣ
(ੲ) ਕਮ (ਸ) ਨਿਰ

ਸੈਕਸ਼ਨ-ਸੀ

5. ਨਾਨਕੇ ਅਤੇ ਦਾਦਕੇ ਪਰਿਵਾਰ ਨਾਲ ਸੰਬੰਧਿਤ ਚਾਰ-ਚਾਰ ਰਿਸ਼ਤਿਆਂ ਦੇ ਨਾਂ ਲਿਖੋ।
6. ਵਪਾਰਕ ਵਰਤੋਂ ਵਾਲੇ ਕੋਈ ਅੱਠ ਸ਼ਬਦ ਲਿਖੋ।

ਸੈਕਸ਼ਨ-ਡੀ

7. ਪੰਜਾਬ ਦੀਆਂ ਰੁੱਤਾਂ ਦੇ ਨਾਂ ਲਿਖੋ।
8. 41 ਤੋਂ 50 ਤੱਕ ਦੀ ਗਿਣਤੀ ਨੂੰ ਸ਼ਬਦਾਂ ਵਿੱਚ ਲਿਖੋ।

281118

Paper Code: 8209 (100)

Programme	Course Code	Exam Code
B.A Sem-I	BARL-1431	103201
B.Sc. (Non-Medical) Sem-I	BSNL-1431	103301
B.Sc.(Medical) Sem-I	BSML-1431	103301
B.Sc.(Eco) Sem-I	BECL-1431	103301
B.Sc.(C.Sc) Sem-I	BCSL-1431	103301
B.Com Sem-I	BCRL-1431	108501
BBA Sem-I	BBRL-1431	105401
B.A (JMC) Sem-I	BJML-1431	108701
B.Sc (FD) Sem-I	BFDL-1431	108601
B.Sc(H.Sc) Sem-I	BHSL-1431	108201
BCA Sem-I	BCAL-1431	107201
B.Sc(IT) Sem-I	BITL-1431	105701
B.Sc(BT) Sem-I	BBTL-1431	107401
B.A(Hons.) in English Sem-I	BOEL-1431	107501
B.Sc (Hons.) Agriculture Sem-I	BACL-1431	108301
B.Com (Hons.) Sem-I	BCOL-1431	109101

Course Title: Punjab History & Culture

Time Allowed: 3 Hours

Max Marks: 40

Note:

- (i) Question paper consist of four units.
- (ii) Attempt five questions in all at least selecting one from each unit.
- (iii) Each question will carry 8 marks

Unit-1

1. Discuss briefly the physical features of the Punjab. 8
2. Write a note on the following as sources of Punjab History and Culture:-
 - a. Vedic Literature
 - b. Accounts of foreign travellers. 4+4=8

Unit-2

3. Discuss the town planning and Architure, art and religion of Harappan civilization. 8
4. Critically discuss the various theories regarding original home of the Aryans. 8

Unit-3

5. Write a note on social and economic life of Rig Vedic people. 8
6. Elaborate the changes in religious and economic life of people in later Vedic age. 8

Unit-4

7. Write a brief note on life and teachings of Lord Bhuddha. 8
8. Discuss the spread and impact of Jainism in Punjab. 8

Hindi Version

नोट :-

- (1) प्रश्न पत्र चार यूनिट पर आधारित है।
- (2) प्रत्येक यूनिट से एक प्रश्न करते हुए कुल पाँच प्रश्नों के उत्तर लिखो।
- (3) प्रत्येक प्रश्न के आठ अंक हैं।

यूनिट-1

1. प्राचीन पंजाब की भूगोलिक विशेषताओं का वर्णन करो। 8
2. निम्नलिखित पर पंजाब के ऐतिहासिक स्रोतों के रूप में नोट लिखो:- 8
 - (क) वैदिक साहित्य
 - (ख) विदेशी यात्रियों के वृतांत

यूनिट-2

3. हड़प्पा सभ्यता नगर योजना, भवन निर्माण कला, कला धार्मिक जीवन का वर्णन करो। 8
4. आर्यों के मूल निवास-स्थान के बारे में भिन्न-भिन्न सिद्धान्तों का आलोचनात्मक वर्णन करो। 8

यूनिट-3

5. ऋग्वैदिक आर्यों की सामाजिक और आर्थिक जीवन पर नोट लिखो। 8
6. उत्तर वैदिक काल में धार्मिक और आर्थिक जीवन में हुए परिवर्तन का उल्लेख करो। 8

यूनिट-4

7. महात्मा बुद्ध के जीवन और शिक्षाओं पर नोट लिखो। 8
8. जैन धर्म के पंजाब में विकास और प्रभाव का वर्णन करो। 8

31218

Paper Code: 8211 (460)

Programme	B.A. (Sem: I)	B.Sc (NM) (Sem: I)	B.Sc.(Med) (Sem: I)	B.Sc(Eco) (Sem: I)	B.Sc(C.Sc) (Sem: I)	B.Com (Sem: I)	BBA (Sem: I)
Exam Code	103201	103301	103301	103301	103301	108501	105401
Course Code	BARL-1212	BSNL-1212	BSML-1212	BECL-1212	BCSL-1212	BCRL-1212	BBRL-1212

Course Title: English Compulsory (~~Communication Skills in English~~)

Time Allowed: 3 Hours

Max Marks: 40

Note : All questions are compulsory.

Section A

I. Complete any ten of the following sentences using the correct form of verbs/modals given in brackets

1. Renu prefers to stay at home, earlier she.....a lot. (travel)
2. We don't have much time. We.....hurry. (Can/must)
3. Grandfather travelled a lot, He.....five languages. (speak)
4. It is getting cold, You.....wear a coat. (Should/may)
5. Igo home now or mother would be worrying. (had better/may)
6. I get you a cup of coffee? (Can/may)
7. I insisted that he.....apologise. (may/should)
8. You've been travelling all day, yoube tried. (may/must)
9.I use your phone? (Shoud/May)
10. Your bag looks heavy. Ihelp you with it. (will/can)
11. Therebe three cinemas in this town, now there is just one. (used to / can)
12. She.....her finger. It is bleeding (cut)
13. The Sun.....in the East, (rise)
14. We all.....our parents. (love)

1x10=10

Section B

II. Write a paragraph on **any one** of the following:

1. Social Networking Sites
2. The Person You Advice the Most

5

III. Do as directed (any five)

1. Neena said, "I have never been to the Museum" (Change into Reported Speech)
2. The doctor said, "Take care of your health" (Change into Reported Speech)
3. How much will you be paid for your work? (Change the Voice)
4. Someone is singing a song. (Change the Voice)
5. I didn't paint the house myself. (Change the Voice)
6. My father said to me, "Let us go for a walk". (Change into Reported Speech)
7. It is time to close the shop. (Change the Voice)
8. The murderer was sentenced. (Change the Voice)

1x5=5

Section C

IV. Discuss the theme of "The Story Teller"

Or

Attempt character sketches of

Madhav and Gheesu (The Shroud)

6

V. Answer **any two** of the following.

1. Comment on the lady's remark "I never eat anything for luncheon". (The Luncheon)
2. How do the father and son collect five rupees for the shroud? (The Shroud)
3. How does the aunt react to the story and what reply does the bachelor give?

(The Story Teller)

2x2=4

Section D

VI. How is the power of women displayed in the chapter? (The Power of Women)

Or

How is universal declaration of Human Rights a charter for the full growth of the potential of human beings?

6

VII. Answer **any two** of the following.

1. Why is a spendthrift likely to have too many friends? (On Spendthrifts)
2. How could the author be useful from the medical point of view? (Symptoms)
3. How does democracy vary from one country to another? (A Dialogue on Democracy)

2x2=4

6/12 M

Paper Code: 8213 (400)

Programme	Course Code	Exam Code
B.A (JMC) Sem-I	BJML-1102	108701
B.Sc (FD) Sem-I	BFDL-1102	108601
B.Sc(H.Sc) Sem-I	BHSL-1102	108201
BCA Sem-I	BCAL-1102	107201
B.Sc(IT) Sem-I	BITL-1102	105701
B.Sc(BT) Sem-I	BBTL-1102	107401
B.Sc (Hons.) Agriculture Sem-I	BACL-1102	108301
B.Voc(RM) Sem-I	BVRL-1102	111801
B.Voc(MSP) Sem-I	BVML-1102	111601
B.Voc(Animation) Sem-I	BVAL-1102	112201
B.Voc(TDAT) Sem-I	BVTL-1102	111201
B.Voc(NEH) Sem-I	BVNL-1102	111401
B.Voc(B&W) Sem-I	BVBL-1102	113801

Course Title: Communication Skills in English**Time : 3 Hours****Marks : 40**

1. Note : Attempt 5 questions in all, selecting one question from each section and the fifth from any section. Each question carries 8 marks.

2. Write legibly.

Section A

1. What do you understand by the meaning, definition and process of communication?

Discuss in detail.

Or

Explain Intensive Reading skills.

8

Section B

2. Read the following passage and answer the questions in multiple choice form. Mark (v) in front of the right answer.

When I go into a stranger's library, I wander round the book-shelves to learn what sort of a person the stranger is and when he comes in, I feel that I know the key to his mind and the range of his interests. A house without books is a characterless house, no matter how rich

the persian rugs and how elegant. The settees and the ornaments may be. The persian rugs only tell you that he has got money, but the books tell you he has got a mind as well. It is not the question of money that we don't buy books. I repeat that books are the cheapest as well as the best part of the equipment of a house. You can begin your library with the expenditure of a couple of shillings. Nearly all the best literature in the world is at our command at two shillings a volume. For five pounds, you can get a library of fifty books. Even if you don't read them yourself, they are a priceless investment for your children. what delight is there like the revelation of books, the sudden impact of a master-spirit, the sense of window flung wide open on the universe! It is these adventures of the mind, The joy of which does not pass away, that gives the adventure of life itself, beauty and fragrance.

1. The narrator learns about the stranger's interest when :

- a) he enters the library
- b) he looks at the bookshelves
- c) he picks up some books
- d) he sees the stranger

2. What distinguishes a house and its owner?

- a) the rich persian rugs
- b) gorgeous settees
- c) costly ornaments
- d) presence of books

3. Mark the correct statement :

- a) Buying books is very costly.
- b) Books are the best part of a house.
- c) The best literature in the world costs two shillings.
- d) A library of fifty books will cost less than five pound.

4. Which of the following is not an adventure of the mind?

- a) immediate effect of great writers
- b) experience of delight by reading books
- c) glimpse of the whole universe

d) Valuable investment for the children

5. What does an adventure mean?

a) Courage

b) an unusual, exciting event

c) enterprise

d) guess

$$1\frac{1}{2} + 1\frac{1}{2} + 1\frac{1}{2} + 1\frac{1}{2} + 2 = 8$$

3. Read the following passage and answer the questions that follow:

One of the greatest advances in modern technology has been the invention of computer. They are already widely used in industry and in universities. Now there is hardly any sphere of human life where computer have not been pressed into the service of man. We are heading fast towards a situation when a computer will be as much part of man's daily life as a telephone or calculator.

Computer are capable of doing extremely complicated work in all branches of learning. They can solve the most complex mathematical problems or put thousands of unrelated facts in order. These machine can be put to varied uses. For instance, they can provide information on the best way to prevent traffic accidents, or they can count number of times the word "and" has been used in the Bible. Because they work accurately and at high speeds, they save research workers years of hard work. This whole process by which machines can be used to work for us has been called "automation." In the future automation may enable human beings far more leisure than they do today. The coming of automation is bound to have important social consequences.

Some years ago an expert on automation, Sir Leon Bagrit, pointed out that it was a mistake to believe that these machines could "think". There is no possibility that human beings will be "controlled" by machines. Though computer are capable of learning from their mistakes and improving on their performance, the need detailed instructions from human beings to be able to operate. They can never, as it were, lead independent lives or "rule the world" by making decisions of their own.

1. Why does the writes call computers the greatest invention of modern technology?

2. Give examples of the various uses to which the computer can be put.

3. What is automation?
4. What is the theory of Sir Leon Bagrit?
5. Will computers over "rule the world?"
6. Give the meaning of

i) Sphers ii) consequence iii) Performance

5+3 = 8

Section C

4. What are the basics of effective writing?
5. What are the principles of business letters?

8

Section D

6. Explain in detail the importance of preparing a resume.
7. Write a note on minutes of the meeting.

8

08/12/18

Paper Code: 8215 (950)

Programme

Exam Code

B.A.	103201
B.Sc. Non-Medical	103301
B.Sc. Med.	
B.Sc. Eco.	
B.Sc. C.Sc.	
B.Com.	108501
BBA	105401
B.A. (JMC)	108701
B.Sc. (FD)	108601
B.Sc (H.Sc.)	108201
BCA	107201
B.Sc.(IT)	105701
B.Sc.(BT)	107401
B.A. (Hons.) in English,	107501
B.Sc (Hons.) Agriculture)	108301
B.Com (Hons.)	109101
B.Voc Retail Mgmt.	111801
B.Voc MSP	111601
B.Voc Animation	112201
B.Voc TDAT	111201
B.Voc NEH	111401
B.Voc Beauty & Wellness	113801

Course Code : AECD 1161

Course Title: Drug Abuse

Time Allowed: 3 Hours

Max Marks: 40

Note : Attempt 5 question one from each section & fifth question from any of the sections. Each question carries 8 marks.

Section A

1. What is drug abuse? What is the status of Punjab in this aspect? 8
2. Discuss major reasons of drug abuse and its demand in Punjab 8

Section B

3. How drug abuse effects the personal life of an individual?
4. Write notes on :
 - a) Crime rate in society increases due to drugs.
 - b) The drug abuses are burden on nation, explain.

Section C

5. Define drug relapse management what are its types?
6. Discuss medical treatment of drug abuse.

Section D

7. What are various types of therapies used to assist drug de-addiction. Discuss any one in detail.
8. Discuss the role of family in drug de-addiction.

Punjabi Version

ਨੋਟ : ਕੁਲ ਪੰਜ ਪ੍ਰਸ਼ਨ ਕਰੋ। ਹਰ ਇਕ ਸੈਕਸ਼ਨ ਵਿਚੋਂ ਇਕ ਪ੍ਰਸ਼ਨ ਜ਼ਰੂਰੀ ਹੈ। ਪੰਜਵਾਂ ਪ੍ਰਸ਼ਨ ਕਿਤੋਂ ਵੀ ਕਰੋ। ਹਰ ਸਵਾਲ 8 ਨੰਬਰ ਦਾ ਹੈ।

ਸੈਕਸ਼ਨ - ਓ

1. ਨਸ਼ਾ ਦੁਰਵਰਤੋਂ ਕੀ ਹੈ ? ਪੰਜਾਬ ਵਿਚ ਇਸ ਦੀ ਸਥਿਤੀ ਬਾਰੇ ਲਿਖੋ। (8)
2. ਨਸ਼ਾਖੋਰੀ ਦੇ ਕਾਰਨਾਂ ਬਾਰੇ ਵਿਸਥਾਰ ਵਿਚ ਲਿਖੋ ਅਤੇ ਪੰਜਾਬ ਵਿਚ ਇਸ ਦੀ ਮੰਗ ਦੇ ਕਾਰਨ ਲਿਖੋ। (8)

ਸੈਕਸ਼ਨ - ਅ

3. ਨਸ਼ਾਖੋਰੀ ਇਕ ਵਿਅਕਤੀ ਦੇ ਨਿੱਜੀ ਜੀਵਨ ਨੂੰ ਕਿਵੇਂ ਪ੍ਰਭਾਵਿਤ ਕਰਦੀ ਹੈ ? (8)
4. ਹੇਠ ਲਿਖਿਆਂ ਤੇ ਨੋਟ ਲਿਖੋ :
 - (1) ਨਸ਼ਾਖੋਰੀ ਕਰਕੇ ਸਮਾਜ ਵਿਚ ਜ਼ਰਮ ਵੱਧਦਾ ਹੈ
 - (2) ਨਸ਼ੇੜੀ ਦੇਸ਼ ਉਤੇ ਇਕ ਬੋਝ ਹਨ, ਵਿਸਥਾਰ ਕਰੋ (8)

ਸੈਕਸ਼ਨ - ਏ

5. ਨਸ਼ਾ ਮੁੜ ਵਰਤੋਂ ਤੋਂ ਬਚਣ ਦੇ ਪ੍ਰਬੰਧਨ ਕੀ ਹੈ ? ਇਸ ਦੀਆਂ ਕਿਸਮਾਂ ਵਿਸਥਾਰ ਵਿਚ ਲਿਖੋ। (8)
6. ਨਸ਼ਾਖੋਰੀ ਦੇ ਮੈਡੀਕਲ ਪ੍ਰਬੰਧਨ ਬਾਰੇ ਲਿਖੋ।

ਸੈਕਸ਼ਨ - ਸ

7. ਵਿਭਿੰਨ ਪ੍ਰਕਾਰ ਦੀਆਂ ਨਸ਼ਾ ਛੜਾਉ ਥੈਰੇਪੀਆਂ ਬਾਰੇ ਦੱਸੋ। ਕਿਸੇ ਇਕ ਬਾਰੇ ਵਿਸਥਾਰ ਕਰੋ। (8)
8. ਨਸ਼ਾ ਛੜਾਉਣ ਵਿਚ ਪਰਿਵਾਰ ਕਿਵੇਂ ਸਹਾਈ ਹੋ ਸਕਦਾ ਹੈ - ਲਿਖੋ। (8)

Hindi Version

नोट : कुल पांच प्रश्न करें। हर भाग में से एक प्रश्न जरूरी है। पांचवां प्रश्न कहीं से भी करें। प्रत्येक प्रश्न 8 नंबर का है।

भाग क

1. नशाखोरी क्या है? पंजाब में नशाखोरी की स्थिति का उल्लेख करें। 8
2. पंजाब में नशाखोरी के मुख्य कारण तथा उसकी मांग का वर्णन करें। 8

भाग ख

3. नशाखोरी व्यक्ति के निजी जीवन को किस प्रकार प्रभावित करती है। 8
4. निम्नलिखित पर नोट लिखें :-
 1. नशाखोरी के कारण समाज में बढ़ते अपराध। 8
 2. नशाखोरी देश पर एक बोझ हैं। विस्तार कीजिए। 8

भाग ग

5. नशे के दोबारा प्रयोग से बचने के प्रबन्धन क्या हैं और इसकी किसमों का वर्णन करें। 8
6. नशाखोरी के मैडीकल प्रबन्धनों का उल्लेख कीजिए। 8

भाग घ

7. नशा छुड़ाने के लिए विभिन्न चिकित्साओं (therapies) कौन सी है? किसी एक का विस्तार करें। 8
8. नशा छुड़वाने में परिवार किस प्रकार सहयोगी हो सकता है। 8

26-11-18

Paper Code: 8216 (120)

Programme	B.A. (Sem: I)	B.Sc.(Non-Med) (Sem: I)	B.Sc (Eco.) (Sem: I)	B.Sc(C.Sc) (Sem: I)
Exam Code	103201	103301	103301	103301
Course Code	BARM-1333(I)	BSNM-1333(I)	BECEM-1333(I)	BCSM-1333(I)

Course Title: Mathematics (Algebra)**Time Allowed: 3 Hours****Max Marks: 40**

Instructions : Attempt five questions in all selecting at least one question from each section. The fifth question may be attempted from any section. Each carries equal marks.

Section-A

1. (i) Find the inverse of the matrix $\begin{pmatrix} -1 & 1 & 2 \\ 0 & 2 & 1 \\ -1 & 3 & 4 \end{pmatrix}$ by using elementary operations.

- (ii) Find the rank of matrix

$$\begin{pmatrix} 1 & 2 & -1 & 0 \\ 3 & 1 & 4 & 2 \\ 1 & -3 & 6 & 2 \end{pmatrix}$$

2. (i) Find the only real value of λ for which the following system of linear equations has a non-zero solution.

$$x + 2y + 3z = \lambda x, \quad 3x + y + 2z = \lambda y, \quad 2x + 3y + z = \lambda z,$$

Hence solve the system of equations.

- (ii) Determine the value of k so that the vectors $\begin{pmatrix} 1 \\ -1 \\ 3 \end{pmatrix}$, $\begin{pmatrix} 1 \\ 2 \\ -2 \end{pmatrix}$ and $\begin{pmatrix} k \\ 0 \\ 1 \end{pmatrix}$ are linearly dependent.

Section-B

3. (i) if λ is an eigen value of a non-singular matrix A , prove that $\frac{A}{\lambda}$ is an eigen value of $\text{adj } A$.

(ii) verify Cayley Hamilton theorem for the matrix

$$\begin{pmatrix} 2 & -1 & 1 \\ -1 & 2 & -1 \\ 1 & -1 & 2 \end{pmatrix}$$

4. (i) Show that the transformation

$$y_1 = x_1 - x_2 + x_3, \quad y_2 = 3x_1 - x_2 + 2x_3,$$

$$y_3 = 2x_1 - 2x_2 + 3x_3 \text{ is regular.}$$

- (ii) Obtain the quadratic form corresponding to the following symmetric matrix.

$$\begin{pmatrix} 0 & a_1 & a_2 & a_3 \\ A_1 & 0 & b_1 & b_2 \\ A_2 & b_1 & 0 & c_1 \\ A_3 & b_2 & c_1 & 0 \end{pmatrix}$$

Section-C

5. (i) Define gram matrix. Show that the gram matrix $B'B$ is always positive definite or positive semi definite & it is definite or semi-definite according as the rank of B is equal to or less than the number of its columns.

(ii) What do you mean by congruence of quadratic form & matrices. Show that the ranges of values of two congruent quadratic forms are same.

6. Define definite, Semi-definite & indefinite real quadratic forms. Prove that the form $5x^2 + 26y^2 + 10z^2 + 4yz + 14zx + 6xy$ is positive semi-definite & find a non-zero set of values of x, y, z which makes the form zero.

Section-D

7. (i) Solve the equation $3x^2 - 19x^2 + 33x - 9 = 0$ Which has repeated roots.

(ii) If α, β, γ are roots of $x^3+3x+2=0$, find equation whose roots are $(\alpha-\beta)(\alpha-\gamma), (\beta-\gamma)(\beta-\alpha), (\gamma-\alpha)(\gamma-\beta)$.

8. Solve the equation $49x^4+42x^3+3x^2-1=0$ by Descarte's Method.

Programme	B.A. (Sem: I)	B.Sc.(Non-Med) (Sem: I)	B.Sc (Eco.) (Sem: I)	B.Sc(C.Sc) (Sem: I)
Exam Code	103201	103301	103301	103301
Course Code	BARM-1333(II)	BSNM-1333(II)	BECM-1333(II)	BCSM-1333(II)

Course Title: Mathematics (Calculus & Trigonometry)

Time Allowed: 3 Hours

Max Marks: 40

NOTE

Attempt Five Questions in all, Selecting one Question from each Section. The fifth question may be selected from any Section.

Section A

- I. (A) Solve $\frac{2}{|3-5x|} \leq 7$.
 (B) Find the l.u.b. and g.l.b. of the set $\left\{ \frac{2x+1}{x+5} : |x-4| < 2 \right\}$ (4+4)
- II. (A) Prove that $\text{Lt}_{x \rightarrow a} \frac{1}{x-a}$ does not exist.
 (B) Show that $f(x) = x^3$, $0 \leq x \leq 2$ is uniformly continuous. Also find δ which will correspond to the given $\epsilon > 0$ (4+4)

Section B

- III. (A) Find $\frac{dy}{dx}$, if $y = x^{\cosh x} + (\sinh x)^2$
 (B) If $y = \sin(\log x)$, show that $x^2 y_2 + x y_1 + y = 0$. (5+3)
- IV. (A) Expand $\log(\sin x)$ in powers of $x-3$ upto first four terms.
 (B) Evaluate $\text{Lt}_{x \rightarrow 0} \left(\frac{1}{x^2} \right)^{\tan x}$ (4+4)

Section C

- V. (A) Show that $2^7 \sin^3 \theta \cos^5 \theta = -[\sin 8\theta + 2 \sin 6\theta - 2 \sin 4\theta - 6 \sin 2\theta]$.
 (B) Find the fourth roots of $-1 + i\sqrt{3}$ (5+3)

VI. (A) Separate into real and imaginary part : $\tan^{-1}(x + iy)$

(B) Solve the equation $(1 + x)^3 = i(1 - x)^3$ (4+4)

Section D

VII. (A) By using Gregory's Series prove that

$$1 - \frac{1}{3 \cdot 4^2} + \frac{1}{5 \cdot 4^4} - \dots \infty = 4 \tan^{-1} \frac{1}{4}$$

(B) If $\sin(+i\varphi) = \tan \alpha + i \sec \alpha$, show that $\cos 2\theta \cosh 2\varphi = 3$ (4+4)

VIII. (A) Sum the series to n terms: $1 + x \cos \theta + x^2 \cos 2\theta + x^3 \cos 3\theta + \dots$

(B) Sum to n terms the series $\sin^3 \alpha + \sin^3 2\alpha + \sin^3 3\alpha + \dots$ (4+4)

Paper Code: 8218 (70)

Programme	B.A. (Sem: I)	B.Sc.(Eco) (Sem: I)	B.Sc (C.Sc.) (Sem: I)
Exam Code	103201	103301	103301
Course Code	BARM-1134	BECM-1134	BCSM-1134

Course Title: Computer Science (Computer Fundamental & PC Software)

Time Allowed: 3 Hours

Max Marks: 50

Note:

Attempt Five Questions in all, Selecting one Question from each Section. The fifth question may be selected from any Section.

Unit-1

1. (a) What is a computer? Discuss the various uses of a computer system. 5
- (b) Discuss the milestones in computer hardware and software. 5
2. What do you understand by primary memory? Discuss various types of primary memories. 10

Unit-2

3. (a) Differentiate between MICR and OCR. 5
- (b) Explain light pen and joystick. 5
4. What do you understand by output devices? Discuss the various types of printers. 10

Unit-3

5. (a) What are the functions of the task bar in Windows? 5
- (b) Discuss My Computer and Windows Explorer in Windows Operating System. 5
6. What do you understand by Windows OS? Discuss the various icons displayed on the Windows screen by default. 10

Unit-4

7. (a) Discuss the various views of Ms-PowerPoint. 5
- (b) Discuss how we can add multimedia in a PowerPoint presentation. 5
8. (a) Discuss various formatting features of MSWord. 5
- (b) Explain borders and shading in MS-Word. 5

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Paper Code: 8219 (30)

Programme	B.A.	B.Sc.(Eco)
	(Sem: I)	(Sem: I)
Exam Code	103201	103301
Course	BARM-	BECM-1124
Code	1124	

**Course Title: Computer Applications (Computer
Fundamental & PC Software)**

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

Note : Candidates are requested to attempt five questions, selecting at least one question from each section (A-D). The fifth question may be attempted from any section. Each question carry equal marks.

Section A

1. Explain the following types of memories 5x2=10
- Dynamic Ram
 - Cache Memory
 - Optical disk
 - EPROM
 - Floppy disk

2. What is software ? Explain the various types of software. 10

Section B

3. What is a folder? How folders are created? Explain the new rules for naming files in windows vista.

4. Explain the following with respect to windows operating system. 5x2=10

- a) Recycle Bin
- b) My Computer icon
- c) Find
- d) Shutdown
- e) Desktop

Section C

5. a) How page setup is done in MS Word? 5
- 5 b) How borders and shading is applied in MS Word? 5
6. Explain how tables are inserted, edited and formatted in MS Word 10

Section D

7. Explain how animation and slide transition is applied in MS Power Point 10

8. Explain the following with respect to MS Power Point. 5x2=10

- a) Adding Art
- b) Printing slides
- c) Starting Slideshow
- d) Templates
- e) Adding text to slides

Paper Code: 8220 (60)

Programme	B.A. (Sem: I)	B.Sc.(Eco) (Sem: I)
Exam Code	103201	103301
Course Code	BARL-1175	BECL-1175

Course Title: Economics (Micro Economics)**Time Allowed: 3 Hours****Max Marks: 80****Note:**

- Attempt five questions in all selecting at least one question from each section.
- The fifth question may be attempted from any section.

Section-A

1. Explain the meaning of price elasticity of demand. Give three methods of its measurement.

ਸਾਂਗ ਦੀ ਕੀਮਤ ਲੋਚ ਕੇ ਅਰਥ ਦੀ ਬਿਆਨ ਕੀਜੀਏ। ਇਸੇ ਮਾਪਨੇ ਦੀ ਤੀਨ ਵਿਧੀਆਂ ਦੀਜੀਏ।

ਮੰਗ ਦੀ ਕੀਮਤ ਲੋਚ ਦੇ ਅਰਥ ਦੀ ਵਿਆਖਿਆ ਕਰੋ। ਇਸ ਨੂੰ ਮਪਣ ਦੀਆਂ ਤਿੰਨ ਵਿਧੀਆਂ

ਦੱਸੋ।

(4, 12)

2. What are indifference curves? Explain various properties of indifference curves.

ਤਟਸਥਤਾ ਕਰ ਕੀ ਹੈ? ਤਟਸਥਤਾ ਕਰਾਂ ਦੀ ਵਿਭਿੰਨ ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ ਦੀ ਵੀ ਵੀਆਖਿਆ ਕੀਜ਼ਿਏ।

ਤਟਸਥਤਾ ਵੱਕਰ ਕੀ ਹਨ? ਤਟਸਥਤਾ ਵੱਕਰਾਂ ਦੀਆਂ ਤਿੰਨ-ਤਿੰਨ ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ ਦੀ ਵਿਆਖਿਆ ਕਰੋ। (4, 12)

Section-B

3. What do you understand by returns to scale? Explain the three stages of returns to scale?

ਪੈਮਾਨੇ ਦੇ ਪ੍ਰਤਿਫਲ ਤੋਂ ਆਪ ਕੀ ਸਮਝਦੇ ਹੋ? ਪੈਮਾਨੇ ਦੇ ਪ੍ਰਤਿਫਲ ਦੀ ਤਿੰਨ ਅਵਸਥਾਵਾਂ ਦੀ ਵੀਆਖਿਆ ਕੀਜ਼ਿਏ।

ਪੈਮਾਨੇ ਦੇ ਪ੍ਰਤਿਫਲ ਤੋਂ ਤੁਸੀਂ ਕੀ ਸਮਝਦੇ ਹੋ? ਪੈਮਾਨੇ ਦੇ ਪ੍ਰਤਿਫਲ ਦੀ ਤਿੰਨ ਅਵਸਥਾਵਾਂ ਦੀ ਵਿਆਖਿਆ ਕਰੋ। (16)

4. Explain the relationship between average revenue, Marginal revenue and elasticity of demand.

ਔਸਤ ਆਰ, ਸੀਮਾਤ ਆਰ ਤਥਾ ਮੱਗ ਕੀ ਲੋਚ ਤੋਂ ਸੰਬੰਧ ਕੀ ਵੀਆਖਿਆ ਕੀਜ਼ਿਏ।

ਔਸਤ ਆਮਦਨ, ਸੀਮਾਤ ਆਮਦਨ ਅਤੇ ਮੰਗ ਦੀ ਲੋਚ ਦੇ ਸੰਬੰਧ ਦੀ ਵਿਆਖਿਆ ਕਰੋ।

(16)

Section-C

5. What is perfect competition? Explain the main characteristics of perfect competition.

ਪੂਰਨ ਪ੍ਰਤਿਯੋਗਿਤਾ ਕੀ ਹੈ? ਪੂਰਨ ਪ੍ਰਤਿਯੋਗਿਤਾ ਦੀ ਮੁਖ ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ ਦੀ ਵੀਆਖਿਆ ਕੀਜ਼ਿਏ।

ਪੂਰਨ ਮੁਕਾਬਲਾ ਕੀ ਹੈ? ਪੂਰਨ ਮੁਕਾਬਲੇ ਦੀਆਂ ਮੁੱਖ ਵਿਸ਼ੇਸ਼ਤਾਵਾਂ ਦੀ ਵਿਆਖਿਆ ਕਰੋ। (4,12)

6. What is Monopoly? Explain equilibrium of the firm under monopoly in the short run.

ਏਕਾਧਿਕਾਰ ਕੀ ਹੈ? ਏਕਾਧਿਕਾਰ ਦੇ ਅੰਤਰਗਤ ਅਲਪਕਾਲ ਤੋਂ ਕੀਮਤ ਦੇ ਨਿਰਧਾਰਨ ਦੀ ਵੀਆਖਿਆ ਕੀਜ਼ਿਏ।

ਏਕਾਧਿਕਾਰ ਕੀ ਹੈ? ਏਕਾਧਿਕਾਰ ਦੇ ਵਿੱਚ ਅਲਪਕਾਲੀਨ ਵਿਚ ਫਰਮ ਦੇ ਸੰਤੁਲਨ ਦੀ ਵਿਆਖਿਆ ਕਰੋ। (4,12)

Section-D

7. Critically examine the classical theory of interest.

ਬਾਜ਼ ਦੇ ਪਰਪਰਾਵਾਦੀ ਸਿਧਾਂਤ ਦੀ ਆਲੋਚਨਾਤਮਕ ਬਿਆਨ ਕੀਜ਼ਿਏ।

ਸਮਾਜ ਦੇ ਪਰੰਪਰਾਵਾਦੀ ਸਿਧਾਂਤ ਦੀ ਆਲੋਚਨਾਤਮਕ ਵਿਆਖਿਆ ਕਰੋ। (16)

8. What is profit? Explain risk theory of profit.

ਲਾਭ ਕੀ ਹੈ? ਲਾਭ ਦੇ ਜੋਖਿਮ ਸਿਧਾਂਤ ਦੀ ਬਿਆਨ ਕੀਜ਼ਿਏ।

ਲਾਭ ਕੀ ਹੈ? ਲਾਭ ਦੇ ਜੋਖਿਮ ਸਿਧਾਂਤ ਦੀ ਆਲੋਚਨਾਤਮਕ ਵਿਆਖਿਆ ਕਰੋ। (4,12)

26-11-18

Exam Code : 103301

Paper Code : 8282 (60)

Programme : B.Sc. Economics Sem-I

Course Title : Quantitative Techniques-I

Course Code : BECL-1453

Time Allowed : 3 Hours

Max Marks : 80

Note : Candidates are required to attempt five questions, selecting at least one question from each unit. The fifth question may be attempted from any unit.

UNIT – A

1. A) Find the roots of quadratic equation,

$$\frac{1}{x+1} + \frac{2}{x+2} = \frac{4}{x+4} \quad 8$$

B) Solve :-

$$(x^2 + 2) - 6x(x^2 + 2) + 8x^2 = 0 \quad 8$$

2. A) Solve the equation $1 + 6 + 11 + 16 + \dots + x = 148$ 8

B) Find three numbers in G.P. whose product is 729 and sum of their products in pairs is 819. 8

UNIT – B

3. A) Find the equation of the straight line joining points (1, 5) and (14, 18). 8

Find the angle which this line makes with positive direction of x-axis.

B) Prove that $\sqrt{\frac{1-\sin \theta}{1+\sin \theta}} = \sec \theta - \tan \theta$ 8

4. A) Define difference of two sets with example. 8

B) Define Symmetric difference of two sets with example. 8

UNIT - C

5. A) If $f(x) = 2^x$, then show that $f(x+3) - f(x-1) = \frac{15}{2}f(x)$ 8

B) If $f(x) = \frac{1}{1-x}$, show that $f[f\{f(x)\}]$ 8

6. Evaluate 16

$$\lim_{x \rightarrow 1} \frac{x^2 - 1}{\sqrt{3x+1} - \sqrt{5x-1}}$$

UNIT - D

7. If

$$x^p y^q = (x+y)^{p+q}, \quad \text{show that } \frac{dy}{dx} = \frac{y}{x} \quad 16$$

8. Prove that

$$e_d = \frac{AR}{AR - MR} \quad 16$$

Where e_d is elasticity of demand, AR is Average Revenue and MR is Marginal revenue.

Exam Code: 103301

Paper Code: 8283 (30)

Programme : B. Sc. Economics. Sem-I

Course Title: Banking & Basic Operations (Opt)

Course Code: BECL-1026

Time Allowed: 3 Hours

Max Marks: 80

Note : Eight question of equal marks covering all the four sections of syllabus. Candidates are required to attempt five question, selecting at least one question from each section. The fifth question may be attempted from any section

Unit 1

1. Money solves the problem of double coincidence of want that would regularly occur under a system of barter. What are the properties which money holds to overcome the problem of double coincidence? Discuss in detail. **16**
2. What do you mean by monetary policy? Discuss its objectives and importance. **16**

Unit II

3. Define the various money supply measure. What is the rationale for these different measures of money supply? **16**

4. What are the premises on which Reserve Bank of India (RBI) is treated as banker's bank of India? Discuss in detail. 16

Unit III

5. Discuss the role and significance of credit Rating Agencies in a country. Does Credit Rating Agencies plays significant role in smooth functioning of financial system of a country? 16

6. Explain the need for regulations of banking sector in India. Briefly discuss the important reforms which have taken place in banking sector. 16

Unit IV

7. Describe the various ways in which a commercial bank renders financial assistance to barrowers. 16

8. Define the term bancassurance. Explain the various forms of bancassurance. 16