SP-1111(A)

M.Sc. (Previous) Examination, 2018

COMPUTER SCIENCE

MCS-102

(Object Oriented Programming) (oop)

Time allowed : Three hours

Maximum Marks : 50

श्री जैन (पी.जी.) कॉलेज, बीकानेर

SECTION - A

(Marks 2 × 10 = 20)

Answer all **ten** questions. (Answer limit 50 words). Each question carries 2 marks.

खण्ड - अ

(अंक 2 × 10 = 20)

समस्त **दस** प्रश्नों के उत्तर दीजिए। (उत्तर सीमा 50 शब्द) प्रत्येक प्रश्न 2 अंक का है।

SECTION - B

(Marks 3 × 5 = 15)

Answer all **five** questions. (Answer limit 200 words). Each question has internal choice. Each question carries 3 marks.

खण्ड - ब

(अंक 3 × 5 = 15)

समस्त **पाँच** प्रश्नों के उत्तर दीजिए। प्रत्येक प्रश्न में विकल्प का चयन करें। (उत्तर सीमा 200 शब्द) प्रत्येक प्रश्न 03 अंक का है।

Answer any **three** questions out of five. (Answer limit 500 words). Each question carries 5 marks.

खण्ड - स

(अंक 5 × 3=15)

पाँच में से किन्हीं **तीन** प्रश्नों के उत्तर दीजिए। (उत्तर सीमा 500 शब्द) प्रत्येक प्रश्न 10 अंक का है।

SECTION - A

खण्ड - अ

1. Attempt all questions. Answer should not exceed 50 words in each question.

   (i) Write the definition of object-oriented programming language. (2)

   (ii) How many types of inheritance are possible in OOPS ? (2)

   (iii) Explain the scope Resolution operator in C++ language. (2)

   (iv) Write the definition of an Array. (2)

   (v) What is class ? Write the syntax to declare a class. (2)

   (vi) Explain the operator overloading. (2)

   (vii) Write the definition of constructor in Java. (2)

   (viii) Explain Java virtual machine briefly. (2)

   (ix) Write the definition of an Applet. (2)

   (x) What is utility class in Java ? (2)

SECTION - B

Attempt all questions. Answer should not exceed 200 words in each question.

2. Explain the component of object oriented programming. (3)

OR

Explain the class and object structure with example. (3)

3. Write a program of call by value method in C++. (3)

OR

Explain logical operator of C++ language. (3)

4. Write a program using friend function. (3)

OR

Explain simple inheritance with example in C++. (3)

5. Explain characteristics of Java. (3)

OR

Explain variables in Java with scope. (3)

6. Explain Applet life cycle. (3)

OR

Write short note on exception handling. (3)

SECTION - C

Attempt any **three** questions out of five. Answer should not exceed 500 words in each question.

7. What is templates ? Explain it with suitable example. (5)

8. What is string ? Explain strlen( ) and strcpy( ) function with example. (5)

9. What is the rule of constructor implementation ? Explain copy constructor with example. (5)

10. What is Array ? Explain 2-D Array with example. (5)

11. What is multithreading ? Explain it with example. (5)

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MCS-102
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Maximum Marks : 50

श्री जैन (पी.जी.) कॉलेज, बीकानेर

SECTION – A (Marks 2 × 10 = 20)

Answer all **ten** questions (Answer limit **50** words). Each question carries **02** marks.

खण्ड – अ (अंक 2 × 10 = 20)

समस्त **दस** प्रश्नों के उत्तर दीजिए (उत्तर सीमा 50 शब्द) । प्रत्येक प्रश्न 02 अंक का है ।

SECTION – B (Marks 3 × 5 = 15)

Answer all **five** questions. (Answer limit **200** words). Each question has internal choice. Each question carries 3 marks.

खण्ड – ब (अंक 3 × 5 = 15)

समस्त **पाँच** प्रश्नों के उत्तर दीजिए (उत्तर सीमा 200 शब्द) । प्रत्येक प्रश्न में विकल्प का चयन करें । प्रत्येक प्रश्न 3 अंक का है ।

SECTION – C   (Marks 5 × 3 = 15)

Answer any **three** questions out of **five** (Answer limit 500 words). Each question carries **5** marks.

खण्ड – स   (अंक 5 × 3 = 15)

पाँच में से किन्हीं **तीन** प्रश्नों के उत्तर दीजिए (उत्तर सीमा 500 शब्द) ।

प्रत्येक प्रश्न 5 अंक का है ।

SECTION – A

1. Attempt **all** questions. Answer should not exceed 50 words in each question.

   (i) Explain encapsulation with suitable example. **2**

   (ii) Short note on Template and Abstract class. **2**

   (iii) Write a program to read two numbers and display the larger value on the screen. **2**

   (iv) Why is an array called a derived data type ? **2**

   (v) What is class ? How does it accomplish data hiding ? **2**

   (vi) What is a friend function ? What are the merits of using friend function ? **2**

   (vii) Explain the definition of datatypes and Token in Java. **2**

   (viii) Describe abstract classes in Java and how can use in a program ? **2**

   (ix) What are the advantages of using exception handling mechanism in a program ? **2**

   (x) When showed a program throw an exception ? **2**

SECTION – B

Note : Attempt **all** questions. Answer should not exceed 200 words in each question.

2. Distinguish between the following term : **3**

   (a) Object and classes

   (b) Inheritance and Polymorphism

   (c) Dynamic binding and message passing

OR

List a few area of application of oop technology.

3. What are the application of void datatype in C++ ? **3**

OR

Why is an array called a derived datatype ? Explain.

4. What are objects ? How are they created ? **3**

OR

What is constructor ? Is it mandatory to use constructor in a class ?

5. What is class loader subsystem of Java virtual machine ? What is its functioning and purpose ? **3**

OR

How do you identify minor and major garbage collection in Java.

6. What is an exception specification ? When is it used ? Explain with suitable example.   3

OR

What are wrapper classes ? Why wrapper classes were introduced ?

SECTION – C

Note : Attempt any **three** questions out of **five**. Answer should not exceed **500** words in each question.

7. Write a complete class stating function overriding feature in C++.   5

8. Explain add two matrices using multi-dimensional array with C++ programming with output.   5

9. What is string constant pool ?   5

10. Explain Applet Life Cycle.   5

11. Explain friend function algorithm with suitable program.   5

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BPG–1103

M.Sc. (Previous) Examination, 2021

COMPUTER SCIENCE

MCS–102

[Object Oriented Programming (OOP)]

Time : 1½ Hours]　　श्री जैन (पी.जी.) कॉलेज, बीकानेर　　[Maximum Marks : 50

Section–A　　　　　　　　　**(Marks : 2 × 10 = 20)**

Note :– Answer all *ten* questions (Answer limit 50 words). Each question carries 2 marks.

(खण्ड–अ)　　　　　　　　　**(अंक : 2 × 10 = 20)**

नोट :– सभी **दस** प्रश्नों के उत्तर दीजिए (उत्तर-सीमा 50 शब्द)। प्रत्येक प्रश्न 2 अंक का है।

Section–B　　　　　　　　　**(Marks : 3 × 5 = 15)**

Note :– Answer all *five* questions. Each question has internal choice (Answer limit 200 words). Each question carries 3 marks.

(खण्ड–ब)　　　　　　　　　**(अंक : 3 × 5 = 15)**

नोट :– सभी **पाँच** प्रश्नों के उत्तर दीजिए। प्रत्येक प्रश्न में विकल्प का चयन कीजिए (उत्तर-सीमा 200 शब्द)। प्रत्येक प्रश्न 3 अंक का है।

Section–C　　　　　　　　　**(Marks : 5 × 3 = 15)**

Note :– Answer any *three* questions out of five (Answer limit 500 words). Each question carries 5 marks.

(खण्ड–स)　　　　　　　　　**(अंक : 5 × 3 = 15)**

नोट :– पाँच में से किन्हीं **तीन** प्रश्नों के उत्तर दीजिए (उत्तर-सीमा 500 शब्द)। प्रत्येक प्रश्न 5 अंक का है।

1.   Attempt all questions. Answers should not exceed **50** words in each question.

    (i)   Define abstraction with suitable example.

    (ii)   What is Method Overriding ?

    (iii)   What do you mean by Enumeration ?

    (iv)   What is scope of variable ?

    (v)   What is Inline Function ?

    (vi)   What is Virtual Function ?

    (vii) Explain Java characteristics.

    (viii) Explain 'THIS' keyword.

    (ix)   Explain Interface used in Java.

    (x)   What is Java virtual machine ?

Section–B   3 each

Attempt all questions. Answer should not exceed **200** words in each question.

2.   What are the main features of OOP Technology ?

Or

Explain Polymorphism with suitable example.

3.   Write a programme to find factorial of given number.

Or

Explain call by value function with example.

4.   What is Pointer ? Explain its advantage.

Or

Explain type conversion with suitable example.

5.   Explain string classes in C++ with example.

Or

Write short notes on Abstruct Class.

6. Why wrapper class used in Java ? Explain.

Or

Write short note on vector in Java.

Section–C 5 each

Attempt any *three* questions out of five. Answer should not exceed **500** words in each question.

7. Explain the various data type in C++ with example.

8. What is Function ? Explain array and function.

9. What is Friend Function ? Explain it with suitable example.

10. Explain multithreading concept in Java.

11. What is Package ? Explain type of package.