

**Directorate of Distance Education  
Swami Vivekanand Subharti University  
II Year**

**BACHELOR OF Science**

**(B.Sc(PCM))**

**B.Sc(PCM)/ASSIGN/II/YEAR/ A-2018-19**

**Assignments**

**(For June Academic Batch-2018-19)**

**B.Sc(PCM)-09, B.Sc(PCM)-10, B.Sc(PCM)-11,**

**B.Sc(PCM)-12, B.Sc(PCM)-13, B.Sc(PCM)-14**



**DIRECTORATE OF DISTANCE EDUCATION  
SWAMI VIVEKANAND SUBHARTI UNIVERSITY**

Subhartipuram, NH-58, Delhi-Haridwar-Meerut

By-Pass Road, Meerut- 250 005

**Directorate of Distance Education**  
**Swami Vivekanand Subharti University**  
**II Year**

**Detail of Program**

<b>Course Code</b>	<b>SLM Code</b>	<b>Name of the subject</b>	<b>Page No</b>
B.Sc(PCM)- 9	SC-114	Mathematics-III (Analysis)	3
B.Sc(PCM)-10	SC-115	Mathematics-IV (Special function & Mechanics)	4
B.Sc(PCM)-11	SC-116	Physics-III (Heat and Thermodynamics)	5
B.Sc(PCM)-12	SC-117	Physics-IV (Optics)	6
B.Sc(PCM)-13	SC-118	Physical Chemistry	7
B.Sc(PCM)-14	SC-119	Organic Chemistry-II	8

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**II Year**

Course Code : B.Sc(PCM)-9  
Course Title : Mathematics-III (Analysis)  
Assignment No. : B.Sc(PCM)-9/ SC-114/A-2018-19  
SLM Code : SC-114  
Maximum Marks : 15  
Words : 100 words

Attempt all questions.

All questions carry equal marks.

Q.1. Show that  $\int_0^1 \frac{dx}{\sqrt{-\log x}} = \sqrt{\pi}$

Q.2. Determine the set of all points where the fn  $f(n) =$  is differentiable.

Q.3. If  $u=y^2/2x$  ,  $v=x/2+y^2/2x$  find  $\partial(u,v)/\partial(x,y)$  .

Q.4. Find the envelope of the family of straight line  $y = mx+a$  , the parameter being M.

Q.5. Discuss the continuity of the functions:

$$f(x) = \cos\left(\frac{1}{x}\right), \text{ when } x \neq 0, f(0) = 0$$

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Course Code : B.Sc. (PCM)-10  
Course Title : Special Function & Mechanics  
Assignment No. : B.Sc. (PCM)-10/ SC-115/ A-2018-19  
SLM Code : SC-115  
Maximum Marks : 15  
Words : 100 words

Attempt all questions.

All questions carry equal marks.

Q.1. Solve  $p = (z+py)^2$

Q.2. Solve  $p^2+q^2 = 1$

Q.3. Find the laplace transform of the function

Q.4. Solve the differential equations  $yzp + zxp = xy$ .

Q.5. Find the complete integral of  $2zx-2px - 2qxy+pq=0$

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Course Code : B.Sc. (PCM)-11  
Course Title : Heat and Thermodynamics  
Assignment No. : B.Sc.(PCM)-11/ SC-116/ A-2018-19  
SLM Code : SC-116  
Maximum Marks : 15  
Words : 100 words

Attempt all questions.

All questions carry equal marks.

- Q.1.** Define the law of equipartition energy.
- Q.2.** Define transport phenomena.
- Q.3.** Define solar constant.
- Q.4.** Define absorptive power.
- Q.5.** Write a short note on black body radiation.

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Course Code : B.Sc. (PCM)-12  
Course Title : Optics  
Assignment No. : B.Sc.(PCM)-12/ SC-117/ A-2018-19  
SLM Code : SC-117

Maximum Marks : 15  
Words : 100 words

Attempt all questions.

All questions carry equal marks.

- Q.1.** Define working of Ramsden's eye piece.  
**Q.2.** Write a short note on action of Nicol's Prism.  
**Q.3.** Define the working of Michelson's interferometer.  
**Q.4.** Write a short note on wavelength of monochromatic light.  
**Q.5.** What is interference of light?

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Course Code : B.Sc. (PCM)-13  
Course Title : Physical Chemistry  
Assignment No. : B.Sc.(PCM)-13/SC-118/ A-2018-19  
SLM Code : SC-118  
Maximum Marks : 15  
Words : 100 words

Attempt all questions.

All questions carry equal marks.

- Q.1.** Define the molecularity.  
**Q.2.** Define the kinetics of enzymes catalysis.  
**Q.3.** What are catalytic promoters?  
**Q.4.** Discuss the properties of emulsions.  
**Q.5.** Write a short note on catalytic poisons.

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Course Code : B.Sc. (PCM)-14  
Course Title : Organic Chemistry-II  
Assignment No. : B.Sc.(PCM)-14/SC-119/ A-2018-19  
SLM Code : SC-119  
Maximum Marks : 15  
Words : 100 words

Attempt all questions.

All questions carry equal marks.

**Q.1.** Write down a Benzophenone from benzoic acid.

**Q.2.** Define the dehydration of ethanol.

**Q.3.** How are alcohols prepared ?

**Q.4.** Write a short note on sulphur drugs.

**Q.5.** Write down a Benzoic acid from salicylic acid.