# **COMPUTER SCIENCE EXAMINATION PATTERN**

FOR

### 1A. DISCIPLINE SPECIFIC CORE COURSES (DSC) (I-IV Semester B. Sc) Theory: 4 Credits : 100 Marks

[Summative assessment (SA)-60 Marks + Internal assessment (IA)-40 Marks] Practical: 2 Credits : 50 Marks

[Summative assessment (SA)-25 Marks + Internal assessment (IA)-25 Marks]

CREDITS: Lecture (L)+ Practical (P) (4:2)	THEORY	PRACTICALS	TOTAL
		Maximum Marks (M)	
Internal Assessment (IA)	40 2 Tests (10+10=20) 2 Assignments (10+10=20)	25 2 Tests + Record (10+10+5)	65
Summative Assessment (SA)	60	25	85
Duration of end semester examination	2 hours	3 hours	
Maximum marks	100	50	150

### **B.C.A., EXAMINATION PATTERN**

FOR

### **1B.** DISCIPLINE SPECIFIC CORE COURSES (DSC) (I-IV Semester B.C.A) Theory: 3 Credits : 100 Marks

[Summative assessment (SA)-60 Marks + Internal assessment (IA)-40 Marks] Practical: 2 Credits : 50 Marks

[Summative assessment (SA)-25 Marks + Internal assessment (IA)-25 Marks]

CREDITS: Lecture (L)+ Practical (P) (3:2)	THEORY	PRACTICALS	TOTAL
		Maximum Marks (M)	
Internal Assessment (IA)	40 2 Tests (10+10=20) 2 Assignments (10+10=20)	25 2 Tests + Record (10+10+5)	65
Summative Assessment (SA)	60	25	85
Duration of end semester examination	2 hours	3 hours	
Maximum marks	100	50	150

# 2. OPEN ELECTIVE COURSES (PROGRESSIVE) (WITH PRACTICALS)

(OEC-PR)(I-IV Semester B. Sc & BCA)

Theory : 2 Credits : 60 Marks

[Summative assessment (SA)-60 Marks + Internal assessment (IA)-30 Marks] Practical: 1 Credit : 10 Marks

[Summative assessment (SA)-00 Marks + Internal assessment (IA)-10 Marks]

CREDITS: Lecture (L)+ Practical (P) (2:1)	THEORY	PRACTICALS	TOTAL
		Maximum Marks (M	)
Internal Assessment (IA)	30 2 Test + 1 Assignment (10+10+10=30)	10 1 Test + Record (5+5)	40
Summative Assessment (SA)	60	-	60
Duration of end semester examination	2 hours		
Maximum marks	60	40	100
• The question paper for SA should be set for 60 Marks with 40 Marks from theory and 20 Marks from Practical No. separate semester end practical exam			

### 3. SKILL ENHANCEMENT COURSES WITHOUT PRACTICALS (SEC) (I-IV Semester B. Sc & BCA)

Theory: 2 Credits: 50 Marks

[Summative assessment (SA)-30 Marks + Internal assessment (IA)-20 Marks] Practical: 0 Credits : 00 Marks

CREDITS:	THEORY	TOTAL
Lecture (L)+ Practical (P) (3:0)	Maximum Marks (M)	
Internal Assessment (IA)	20 1 Test + 1 Assignment (10+10=20)	20
Summative Assessment (SA)	30	30
Duration of end semester examination	1 hour	
Maximum marks	50	50

4.

## SKILL ENHANCEMENT COURSE WITH PRACTICALS (SEC) (I-IV Semester B. Sc. & BCA)

Theory: 1 Credits: 30 Marks

[Summative assessment (SA)-30Marks + Internal assessment (IA)-10 Marks] Practical: 1 Credit: 00 Marks

[Summative assessment (SA)-00 Marks + Internal assessment (IA)-10 Marks]

CREDITS: Lecture (L)+ Practical (P) (1:1)	THEORY	PRACTICALS	TOTAL
		Maximum Marks (M)	
Internal Assessment (IA)	10 1 Test (10)	10 1 Test +Record (5+5)	20
Summative Assessment (SA)	30		30
Duration of end semester examination	1 hour		
Maximum marks	40	10	50
** The question pape 10 marks from practi	r of SA should be set fo cal. No separate semes	r 30 Marks with 20 marks fr ster end practical exams.	om theory and

### 5. BLUE PRINT OF QUESTION PAPERS FOR EXAMINATION AND EVALUATION DISCIPLINE SPECIFIC COURSES (I-IV Semester B. Sc & BCA)

DURATION: 2 HOUR	THE QUESTION PAPER SHALL CONSIST OF THREE PARTS: PART A, PART B & PART C	MAXIMUM MARKS: 60	
Part A	Answer any 6 out of 8 questions [Q1 to Q8] (two questions from each unit)	6 × 2 = 12	
Part B	Answer any 4 out of 6 questions [Q9 to Q14]	4 ×5 = 20	
Part C	Answer any 4 out of 6 questions [Q15 to Q20]	4 × 7 = 28	
i) Equal weightage of marks shall be given to all the units in Part A, Part B and Part C			
ii) In part C, Four main questions should be for Seven Marks and two questions may			
be given with sub-divisions (a) and (b) with $(4+3)/(3+4)$ marks respectively.			

### 6. OPEN ELECTIVE COURSES (NON-PROGRESSIVE) (WITHOUT PRACTICALS) (I-IV Semester B. Sc & BCA)

<b>DURATION:</b>	THE QUESTION PAPER SHALL CONSIST OF	MAXIMUM
2 HOUR	TWO PARTS: PART A AND PART B	MARKS: 60
Part A	Answer any 6 out of 8 questions [Q1 to Q8]	6 × 2 = 12
I UI CIX	(two questions from each unit)	
Part B	Answer any 4 out of 6 questions [Q9 to Q14]	4 ×5 = 20
Part C	Answer any 4 out of 6 questions [Q15 to Q20]	$4 \times 7 = 28$
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i) Equal weightage of marks shall be given to all the units in Part A, Part B and Part C
ii) In part C, Four main questions should be for Seven Marks and two questions may be given with sub-divisions (a) and (b) with (4+3)/(3+4) marks respectively.

### 7. OPEN ELECTIVE COURSES (PROGRESSIVE) (WITH PRACTICALS) (OEC-PR) (I-IV Semester B. Sc & BCA)

<b>DURATION:</b>	THE QUESTION PAPER SHALL CONSIST OF	MAXIMUM MARKS:
2 HOUR	<b>TWO PARTS: PART A AND PART B</b>	60
Part A	Answer any 6 out of 8 questions [Q1 to Q8]	6 × 2 = 12
	(two questions from each unit)	
Part B	Answer any 4 out of 6 questions [Q9 to Q14]	4 ×5 = 20
Part C	Answer any 4 out of 6 questions [Q15 to Q20]	4 × 7 = 28
i) Equal weightage of marks shall be given to all the units in Part A, Part B and Part C		
ii) In part C, F	our main questions should be for Seven Marks an	d two questions may
be given with	sub-divisions (a) and (b) with $(4+3)/(3+4)$ marks	respectively.

### 8. SKILL ENHANCEMENT COURSES WITHOUT PRACTICALS (SEC) (I-IV Semester B. Sc. And BCA)

DURATION: 1 HOUR	THE QUESTION PAPER SHALL CONSIST OF TWO PARTS: PART A AND PART B	MAXIMUM MARKS:30
Part A	Answer any 5 out of 7 questions [Q1 to Q7] (two questions from each unit)	5 × 2 = 10
Part B	Answer any 4 out of 6 questions [Q8 to Q14]	4 ×5 = 20
i) Equal weightage of marks shall be given to all the units in Part A and Part B.		

# 9. SKILL ENHANCEMENT COURSES WITH PRACTICALS (SEC) (I-IV Semester B. Sc.)

DURATION: 1 HOUR	THE QUESTION PAPER SHALL CONSIST OF TWO PARTS: PART A AND PART B	MAXIMUM MARKS: 60
Part A	Answer any 5 out of 7 questions [Q1 to Q7] (two questions from each unit)	5 × 2 = 10
Part B	Answer any 4 out of 6 questions [Q8 to Q14]	4 ×5 = 20
ii) In part B, t	ntage of marks shall be given to all the units in Part A wo questions from the experiments related to practic	A and Part B. cal

# **10.** SCHEME OF VALUATION IN COMPUTER SCIENCE FOR THE PRACTICAL EXAMINATIONS

# I SEMESTER B. Sc & BCA., COMPUTER SCIENCE PRACTICAL DISCIPLINE SPECIFIC COURSE (I Semester B. Sc & BCA) COMPUTER SCIENCE PRACTICAL

Practical (P): Credits:02 Maximum Marks (M)	Marks 50	Total
Internal Assessment (IA)	25 (1 Test + 1 Assignment + viva + record (10+5+5+5)	25
Summative Assessment (SA) Duration of examination	25 3 hours	25

\* Duly certified practical record shall be submitted at the practical examination (no evaluation of record).

Students has to write and execute two programs	A A A A A A A A A A A A A A A A A A A
(one program from Part-A and one program from Part	t-B)
1. Program Write up (2 programs) = $5$	<b>с-</b> Б)
2. Program Execution (2 programs) = $10$	
3. Modification = 05	
4. Viva = 05	
Total – 25	

### First Semester I B.Sc Degree Examination (NEP) Microbiology Course code:MBDSC01 General Microbiology Max.Marks:60

### **Duration: 2 Hrs**

## Instructions to the candidates

- 1) Answer all the questions
- 2) Draw diagrams wherever necessary

Part-A Answer any TEN of the following: (2X10=20) 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12.

#### Part-B

Answer any FOUR of the following : 13.

17.

18.

#### Part-C

Answer any TWO of the following : 19. 20. 21. 22.

# Theory Internal Assessment Pattern

1) Two Theory tests (10 Marks)=20 marks

- 2) Overall performance=10 marks
- 3) <u>Assignment/Seminar=10 marks</u> Total=40 marks

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(5X4=20)

(10X2=20)

### First Semester I B.Sc Degree Examination (NEP) Microbiology Course code:MBDSC01P-General Microbiology Practical examination

Duration: 3Hrs Max.Marks:25

- 1. Stain the given material "A" by Gram staining/Acid-fast staining/Endospore staining. Write the principle procedure and comment on the result. Leave the preparation for evaluation. 8 marks
- 2. Stain the given material "B". Write the principle procedure and comment on the result. Leave the preparation for evaluation.
- 3. Calculate the resolving power/numerical aperture of the given microscope"C".2 marks
- 4. Comment on Principle and applications of "D" & "E".
- 5. Submission of slides
- 6. Practical class record

4 marks

2 marks 5 marks

Scheme of evaluation

1. "A"

Preparation-2 marks Principle-2 marks Procedure-2 marks Comment-2 marks

2. "B"

Preparation-2 marks Principle-2 marks Procedure-2 marks Comment-2 marks

3. "C" Formula-1 mark

4. "D" & "E"

Calculation-1 mark

Principle-1 mark Application-1 mark (Autoclave, Hot air oven, Colorimeter,Incubator,pH meter, LAF, Centrifuge)

## Practical Internal Assessment Pattern

- 1. Practical test= 10 marks
- 2. Viva/Overall performance=5 marks
- 3. Assignment/Seminar=5 marks
- 4. Submission of 2 slides=5 marks

Total=25 marks

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### First Semester I B.Sc Degree Examination (NEP) Microbiology Course code:MBOPEC01 Microbial technology for human welfare

Duration: 2 Hrs

Max.Marks:60

### Instructions to the candidates

3) Answer all the questions

4) Draw diagrams wherever necessary

#### Part-A

Answer any TEN of the following: (2X10=20)

1.		
2.		
3.	, <u>s</u>	
4.		
5.		
б.		
7.		
8.		
9.		
10.		
11.		
12.		
		Part-B
Answer any FC	OUR of the following	
13.		
14.		
15.		
16.		
17.	1	
18.	•	
		Part-C
Answer any TW	O of the following :	
19.		
20.		
21.		
22.		

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(5X4=20)

(10X2=20)

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Question paper pattern for core papers

Max marks: 60

#### **Duration 2 hours**

 $4 \times 8 = 32$ 

Part A: Answer all the four questions (Students will answer all questions. There is an internal choice for each question. Each question carries eight marks)

 Question from unit – I Or

Question from unit – I

- Question from unit II
   Or
   Question from unit II
- Question from unit III
   Or
   Ouestion from unit III
- Question from unit IV
   Or
   Question from unit IV

NOTE: Each question in this section can be subdivided into two or three subsections with desired division of marks.

Part B: Answer any five problems (Students will answer five questions out of eightquestions. Each question carries four marks) $5 \times 4 = 20$ 

- 5. Problem from unit I
- 6. Problem from unit I

Problem from unit – II
 Problem form unit – II
 Problem from unit – III
 Problem from unit – III
 Problem from unit – IV
 Problem from unit – IV

Part C: Answer any four from the following (Students will answer four questions out of eight questions. Each question carries two marks)

 $4 \times 2 = 8$ 

13.

- a. Question from unit I
- b. Question from unit I
- c. Question from unit II
- d. Question from unit II
- e. Question from unit III
- f. Question from unit III
- g. Question from unit IV
- h. Question from unit IV

- Out of eight questions in part C, problems can be given but not more than two.
- Answers to the questions in part C should not be in the form of yes or no.

**Question paper pattern for Open Elective Course** 

Max marks: 60 Duration 2 hours

Answer any six of the following questions (Students will answer any six questions out of nine questions. Each question carries ten marks)

 $6 \times 10 = 60$ 

- 1. Question from unit I
- 2. Question from unit I
- 3. Question from unit I
- 4. Question from unit II
- 5. Question from unit II
- 6. Question from unit II
- 7. Question from unit III
- 8. Question from unit III
- 9. Question from unit III

- Out of questions given for 90 marks, problems must be given for 24 marks. The problems must be chosen without omitting any unit with almost equal weightage.
- Each question can be subdivided into two or three subsections with desired division of marks.
  - Short answer questions (two marks) can be included but not exceeding for 16 marks.
  - Answers to these questions should not be in the form of yes or no.
  - Questions based on passage can be asked but for not more than 5 marks.

# Question paper pattern for Skill Enhancement Course with practical component

### For PHYSEC01: Domestic and Industrial networking

and

PHYSEC02: Instrumentation and measurement

Max marks: 30

#### **Duration 1 hours**

Part A: Answer any two of the following questions (Students will answer any two out of four questions. Each question carries eight marks)

 $2 \times 8 = 16$ 

- 1. Question from unit I
- 2. Question from unit I
- 3. Question from unit I
- 4. Question from unit I

- Out of questions given for 32 marks, problems must be given for 8 marks.
- Each question can be subdivided into two or three subsections with desired division of marks.
- Short answer questions (two marks) can be included but not exceeding for 8 marks out of 32 marks.

Part B: Answer both questions (There is an internal choice in each question wherein student will answer any one of them. Each question carries 5 marks)

 $2 \times 5 = 10$ 

5. Description of principle, procedure and important skill aspect of any experiment

Or

Description of principle, procedure and important skill aspect of any experiment

6. Designing or calculation-based question about an experiment.

Or

Designing or calculation-based question about an experiment.

Part C: Answer any two of the following questions (Students will answer any two out of four questions. Each question carries two marks)

#### $2 \times 2 = 4$

7.\* 8. 9. 10.

NOTE

• Answers to the questions must not be in the form of yes or no.

Question paper pattern for Skill Enhancement Course PHYSEC03: Mathematical ability for competitive exams

Max marks: 30

#### **Duration 1 hour**

Answer any fifteen of the following questions (Students will answer any fifteen out of twenty-four questions. Each question carries one marks)

 $15 \times 2 = 30$ 

Twelve questions must be asked from unit - I

Twelve questions must be asked from unit - II

- Only problems must be asked as questions.
- Answers to these questions should not be in the form of yes or no.

Question paper pattern for Skill Enhancement Course

**PHYSEC03: Science communication** 

Max marks: 30

#### **Duration 1 hour**

 $3 \times 5 = 15$ 

Part A: Answer any three of the following questions (Students will answer any three out of four questions. Each question carries five marks)

 1.
 2.

 3.
 3.

 4.

 5.

Part B: Write a detailed article on any science topic of your interest. (This question carries fifteen marks. Students will an article on any science topic of their interest. The topic they choose must be related to science. Otherwise, no marks are allotted to the answer.)

 $1 \times 15 = 15$ 

6.

Scheme of evaluation for final practical exams

#### Max marks: 25

**Duration 3 hour** 

Writing

Principle and Formula: 2 marks

Circuit diagram, nature of graph and tabular column: 3 marks

#### Performing

Setting up and conducting the experiment, recording the reading: 10 marks

Calculations (with proper units mentioned): 3 marks

Result and accuracy with proper units: 2 marks

Viva

Viva questions regarding the experiment: 3 marks

#### Record

Certified record with minimum 8 experiments: 2 marks

### Scheme of formative assessment (Internal assessment)

#### Theory

The internal assessment must be done in two components.

#### The first component (C1) of assessment is for 20% of total marks: 20 marks

Out of 20 marks 10 marks must be taken from a test and the remaining 10 marks can be taken from any one of the following modes.

- Open book examinations
- Group examinations
- Assignments
- Online or classroom quizzes
- Seminars or presentations or poster preparation
- Field work or small projects or model making
- Activities suggested in curriculum

#### The second component (C2) of assessment is for 20% of total marks: 20 marks

Out of 20 marks 10 marks must be taken from a test and the remaining 10 marks can be taken from any one of the following modes.

- Open book examinations
- Group examinations
- Assignments
- Online or classroom quizzes
- Seminars or presentations or poster preparation
- Field work or small projects or model making
- Activities suggested in curriculum

The first component (C1) of assessment shall be conducted after completing 50% of syllabus of the course/s and within 45 working days of semester program. The second component (C2) of assessment shall be conducted after completion of remaining 50% of the syllabus.

#### Scheme of formative assessment (Internal assessment)

#### Practical

Similar procedure should be followed for internal assessment marks in practical component. Both can be evaluated to 25 marks each and the average of the two can be taken as the final practical internal assessment marks.

**The first component (C1)** must be based on performing suggested activities or any additional activities related to the curriculum.

**The second component (C2)** must be based on conducting practical experiments (With the scheme similar to the final practical exam) after completing the minimum eight experiments.

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Assignments

Online or classroom quizzes

Seminars or presentations or poster preparation

Field work or small projects or model making

Activities suggested in curriculum

The first component (C1) of assessment shall be conducted after completing 50% of syllabus of the course/s and within 45 working days of semester program. The second component (C2) of assessment shall be conducted after completion of remaining 50% of the syllabus.

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