Question Paper For Internal Assessment Examination (Theory) - Credit 4 / 25 /

Instructions for Students/FacultyMid Term I (Total 80 Marks, 2 HRS. Syllabus from Unit-1)

- Part A: Total number of questions to be given are ten (5 from CO1 and 5 from CO2), each carrying 2 marks and are compulsory to attend. There is no choice. They are short answer type questions (**Not More Than 25 Words For both Question & Answer)**, no objective type or fill in the blanks. Total 20 marks.
- Part B: Total number of questions to be given are six (3 from CO1 and 3 from CO2), out of which student must answer four (2 from CO1 and 2 from CO2). They are long answer type (**Not More Than 50 Words for Question)**, each carrying 5 marks. Total 20 marks.
- Part C: Total number of questions to be given are six (3 from CO1 and 3 from CO2), out of which student must answer four (2 from CO1 and 2 from CO2). They are numerical answer type / fully elaborative type (**Not More Than 70 Words for Question)** *, each carrying 10 marks. Total 40 marks.

Mid Term II (Total 120 Marks, 2.5 HRS., Syllabus from Unit-2)

- Part A: Total number of questions to be given are ten (5 from CO3 and 5 from CO4), each carrying 4 marks and are compulsory to attend. There is no choice. They are short answer type questions (**Not More Than 25 Words For both Question & Answer)**, no objective type or fill in the blanks. Total 40 marks.
- Part B: Total number of questions to be given are six (3 from CO3 and 3 from CO4), out of which student has to answer four (2 from CO3 and 2 from CO4). They are long answer type (**Not More Than 50 Words for Question)**, each carrying 7 marks. Total 28 marks.
- Part C: Total number of questions to be given are six (3 from CO3 and 3 from CO4), out of which student has to answer four (2 from CO3 and 2 from CO4). They are numerical answer type / fully elaborative type (**Not More Than 70 Words For Question)** *, each carrying 13 marks. Total 52 marks.

Mid Term III (Total 120 Marks, 2.5 HRS., Syllabus from Unit-3)

- Part A: Total number of questions to be given are ten (5 from CO5 and 5 from CO6), each carrying 4 marks and are compulsory to attend. There is no choice. They are short answer type questions (**Not More Than 25 Words For both Question & Answer)**, no objective type or fill in the blanks. Total 40 marks.
- Part B: Total number of questions to be given are six (3 from CO5 and 3 from CO6), out of which student must answer four (2 from CO5 and 2 from CO6). They are long answer type (**Not More Than 50 Words for Question)**, each carrying 7 marks. Total 28 marks.
- Part C: Total number of questions to be given are six (3 from CO5 and 3 from CO6), out of which student must answer four (2 from CO5 and 2 from CO6). They are numerical answer type / fully elaborative type (**Not More Than 70 Words for Question)** *, each carrying 13 marks. Total 52 marks.

*** LIST OF ELABORATIVE THEORY QUESTION SUBJECTS**: NO SUBJECT UNDER CREDIT FOUR

Instructions For Faculties:

There should be total 6 Course Outcomes (COs) for each subject.

- Mid Term Question Papers are to be submitted as per Course Outcomes (COs) which should be divided equally in Part A, Part B and Part C according to Mid Term Examination and Credit Point.
- In Mid Term-1, the questions are to be given from CO1 and CO2. In Mid Term-2, the questions are to be given from CO3 and CO4. Similarly, in Mid Term-3, the questions are to be given from CO5 and CO6.

- **FACULTY MEMBERS, PLEASE ENSURE EXCEPT ABOVE LISTED SUBJECTS, NO THEORITICAL ELABORATIVE QUESTION SHOULD BE GIVEN IN PART 'C' OF QUESTION PAPER**

INSTRUCTION FOR STUDENTS

- **STUDENT IS ALLOWED TO ENTER LATE NOT MORE THAN 15 MIN AFTER STARTING OF EXAM, AND MAY LEAVE THE EXAM HALL ON EXPIRY OF ATLEAST OF 1 Hr FROM THE STARTING TIME OF EXAMINATION.**

QUESTION PAPER AND STUDENTS DETAILS

Type of Exam	Mid Term 2	**Date of Submission**	28/01/2021
Name of Faculty	Ms. Vijay Laxmi	**Date of Examination**	02/02/2021
Course	B.Tech (Aeronautical Engineering)	**Semester**	SEMESTER : 1
Batch	Twenty-first (21)	**Subject**	1 FY2 - 03 Engineering Chemistry (Cr 4)

COURSE OUTCOMES FOR REFERENCE TO FRAME QUESTION PAPER

(Faculties are required to mention relevant Course Outcome number against the respective question in QP)

Course Outcome	1. Demonstrate the manufacturing of glass and cement, their utility for engineers. 2. Analysis of Different types of organic reaction mechanism and significance of drugs in society.		
Email I'd	vijaylaxmi@soaneemrana.org	**Phone No.**	931-120-9015
Student Name		**Student Reg No.**	

Part A

All the questions are compulsory to attend.

1. CHOOSE COURSE OUTCOME (CO) NUMBER ACCORDING TO THE TYPE OF MIDTERM, AS PER INSTRUCTIONS ABOVE.			3
Question : 1	How soft glass & hard glass are chemically differentiate?		
18	Glass	N.K. Engineering Chemistry	
Question : 2	Why cullets are added during manufacturing of ordinary glass		
18	Glass	N.K. Engineering Chemistry	
Question : 3	List significance of basic constituents of cement?		
14	Cement	N.K. Engineering Chemistry	
Question : 4	Thick film or hydrodynamic lubrication?		

21	Lubrication	N.K. Engineering Chemistry	
Question : 5	List any two physical properties of cement?		
15	Cement	N.K. Engineering Chemistry	
2. CHOOSE COURSE OUTCOME (CO) NUMBER ACCORDING TO THE TYPE OF MIDTERM, AS PER INSTRUCTIONS ABOVE.			4
Question : 6	List any two properties and uses of paracetamol.		
30	Organic Reaction	N.K. Engineering Chemistry	
Question : 7	Define carbocation ? How are they formed?		
29	Organic Reaction	N.K. Engineering Chemistry	
Question : 8	Draw the resonance structure of benzene during the attack of electrophile.		
24	Organic Reaction	N.K. Engineering Chemistry	
Question : 9	What are reactive intermediate? Give example		
26	Organic Reaction	N.K. Engineering Chemistry	
Question : 10	Give chemical reaction o preparation of aspirin in Lab		
30	Organic Reaction	N.K. Engineering Chemistry	

Part B

FOR MIDTERM 1 - Part B: Total number of questions to be given are six (3 from CO1 and 3 from CO2), out of which student must answer four (2 from CO1 and 2 from CO2).
FOR MIDTERM 2 - Part B: Total number of questions to be given are six (3 from CO3 and 3 from CO4), out of which student must answer four (2 from CO3 and 2 from CO4).
FOR MIDTERM 3 - Part B: Total number of questions to be given are six (3 from CO5 and 3 from CO6), out of which student has to answer four (2 from CO5 and 2 from CO6).

3. CHOOSE COURSE OUTCOME (CO) NUMBER ACCORDING TO THE TYPE OF MIDTERM, AS PER INSTRUCTIONS ABOVE.			3
Question : 1	Explain the properties of solid lubricants?		
22	Lubricants	N.K. Engineering Chemistry	
Question : 2	Analyze the purpose of annealing of glass		
18	Glass	N.K. Engineering Chemistry	

Question : 3	Explain the chemical reaction in kiln during manufacturing of cement?		
15	Cement	N.K. Engineering Chemistry	
4. CHOOSE COURSE OUTCOME (CO) NUMBER ACCORDING TO THE TYPE OF MIDTERM, AS PER INSTRUCTIONS ABOVE.			4
Question : 4	Discuss 1,2 Methyl shift during the dehydration of alcohol?		
30	Organic Reaction	N.K. Engineering Chemistry	
Question : 5	Define the carbocation intermediates in organic chemical reactions. Explain it with reaction.		
27	Organic Reaction	N.K. Engineering Chemistry	
Question : 6	Explain Electrophilic Substitution reaction in Benzene?		
27	Organic Reaction	N.K. Engineering Chemistry	
Question : 7 (Old Pattern)			

Part C

FOR MIDTERM 1 - Part C: Total number of questions to be given are six (3 from CO1 and 3 from CO2), out of which student must answer four (2 from CO1 and 2 from CO2).
FOR MIDTERM 2 - Part C: Total number of questions to be given are six (3 from CO3 and 3 from CO4), out of which student must answer four (2 from CO3 and 2 from CO4).
FOR MIDTERM 3 - Part C: Total number of questions to be given are six (3 from CO5 and 3 from CO6), out of which student has to answer four (2 from CO5 and 2 from CO6).

5. CHOOSE COURSE OUTCOME (CO) NUMBER ACCORDING TO THE TYPE OF MIDTERM, AS PER INSTRUCTIONS ABOVE.			3
Question : 1	Define flash point & fire point of lubricating oil Explain the construction and working of Pensky Martin 's Flash point apparatus with Labeled diagram?		
23	Lubricant	N.K.Engineering Chemisty	
Question : 2	Explain construction & working of redwood Viscometer No-1 with labeled diagram?		
22	Lubricants	N.K.Engineering Chemisty	
Question : 3	a. Numerical Problem Please find attachment b. Explain the construction & working of Cloud & pour point Apparatus?		
23	Lubricant	N.K.Engineering Chemisty	

6. CHOOSE COURSE OUTCOME (CO) NUMBER ACCORDING TO THE TYPE OF MIDTERM, AS PER INSTRUCTIONS ABOVE.			4
Question : 4	a. Differentiate between SN_1 and SN_2 reactions ? b. Discuss the mechanism of addition reaction in unsymmetrical alkene?		
25	Organic Reaction	N.K.Engineering Chemisty	
Question : 5	Explain Nucleophilic addition reaction in carbonyl group with energy profile ?		
29	Organic Reaction	N.K.Engineering Chemisty	
Question : 6	Discuss rearrangement of phenyl free radical mechanism in 1-chloro-2-methyl-2-phenyl propene (Urry and Kharash mechanism		
30	Organic Reaction	N.K.Engineering Chemisty	
Upload Scanned Document In Case of Numerical or Diagram For Any of The Above Questions. *(Mention question number with relevant fig / numerical / equations. Max 150 KB)*			
I have scrutinized the question paper. There is no spelling mistake or any type of irrelevant question.			

The message has been sent from 123.63.6.45 (India) at 2021-01-28 09:57:53 on Firefox 86.0
Entry ID: 25

School of Aeronautics (Neemrana)

Numerical Sheet for Part C of New Scheme and Part B of Old Scheme

Question Paper - Credit 1/2/3/4 and 2012 Scheme

Instructions For Students / Faculty
Mid Term I (Total 80 Marks, 2 hrs.)

- Part A: Total number of questions to be given are ten, each carrying 2 marks and are compulsory to attend. There is no choice. They are short answer type questions (**Not More Than 25 Words For both Question & Answer)**, no objective type or fill in the blanks. Total 20 marks.
- Part B: Total number of questions to be given are six, out of which student has to answer any four. They are long answer type (**Not More Than 50 Words for Question)**, each carrying 6 marks. Total 24 marks.
- Part C: Total number of questions to be given are four, out of which student has to answer any three. They are numerical answer type / fully elaborative type (**Not More Than 70 Words For Question)***, each carrying 12 marks. Total 36 marks.

Mid Term II & III (Total 120 Marks, 2.5 hrs.)

- Part A: Total number of questions to be given are ten, each carrying 2 marks and are compulsory to attend. There is no choice. They are short answer type questions (**Not More Than 25 Words For both Question & Answer)**, no objective type or fill in the blanks. Total 20 marks
- Part B: Total number of questions to be given are seven, out of which student has to answer any five. They are long answer type (**Not More Than 50 Words For Question)**, each carrying 8 marks. Total 40 marks.
- Part C: Total number of questions to be given are five, out of which student has to answer any four. They are numerical answer type / fully elaborative type (**Not More Than 70 Words For Question)***, each carrying 15 marks. Total 60 marks.

*** LIST OF ELABORATIVE THEORY QUESTION SUBJECTS**: Communication Skills, Human Values, Technical Communication, Managerial Economics and Financial, Aircraft Materials and Processes, Aircraft Systems, Aircraft Maintenance Practices, Avionics-I, Aircraft Rules and Regulation, Wind Tunnel Techniques, Maintenance of Airframe and System, Helicopter Theory, Avionics-II, Maintenance of Power Plant and System, Unmanned Aerial Vehicles & Systems (UAV), Space Mission Design & Optimization, CAD, Airlines and Airport Management.

FACULTY MEMBERS, PLEASE ENSURE EXCEPT ABOVE LISTED SUBJECTS, NO THEORITICAL ELABORATIVE QUESTION SHOULD BE GIVEN IN PART 'C' OF QUESTION PAPER.

FOR OLD SCHEME INSTRUCTIONS ARE SAME AS ON QP FORMAT OF OLD SCHEME

Question Paper & Student Details

Mid Term *	2	Date of Submission of QP	2/2/2021
Name of Faculty *	Ms.Vijay Laxmi Verma	Date of Examination *	02/02/2021
Subject *	Engineering Chemistry	Course*	AE
Batch	21	Semester *	1
Email Id of Faculty:*		Phone Number of Faculty*	
Student Name		Student Reg No.	

Part C (2017 Scheme) & Part B (2012 Scheme)

Question: 1*

Lesson Plan * Topic* Source*

Question: 2*

Lesson Plan * Topic* Source*

Question: 3

a. An oil Sample under tests has a Viscosity same as that of gulf oil or Naphthamic oil (Low viscosity standard) and paraffinic oil or (high Viscosity index standard) at 210 ˚ F
But viscosity at 100 ˚ F or 38˚ C of oil under test = 61 sec
oil (low viscosity index) = 758 sec
oil (high viscosity index) = 420 sec
calculate viscosity index of oil under test.

Lesson Plan 23 Topic LUBRICANT Source N.K.ENGG

Question: 4

Lesson Plan Topic Source

Question: 5

Lesson Plan | Topic | Source

Question: 6

Lesson Plan | Topic | Source

I have scrutinized the question paper. There is no spelling mistake or any type of irrelevant question.