

School of Aeronautics (Neemrana)

I-04, RIICO Industrial Area, Neemrana, Dist. Alwar, Rajasthan

Approved by Director General of Civil Aviation, Govt. of India, All India Council for Technical Education
Ministry of HRD, Govt of India & Affiliated to Rajasthan Technical University, Kota & BTU, Bikaner Rajasthan

Question Paper For Internal Assessment Examination (Theory) - Credit 2 / 35

Instructions For Students / Faculty Mid Term I (Total 40 Marks, 1.5 HRS. Syllabus From Beginning Of Session)

- Part A: Total number of questions to be given are four, 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 8 marks.
- Part B: Total number of questions to be given are five, out of which student has to answer any three. They are long answer type (**Not More Than 50 Words For Question Only**), each carrying 6 marks. Total 18 marks.
- Part C: Total number of questions to be given are three, out of which student has to answer any two. They are numerical answer type / fully elaborative type* (**Not More Than 70 Words For Question Only**), each carrying 7 marks. Total 14 marks.

Mid Term II & III (Total 60 Marks, 2 HRS. Syllabus From Beginning Of Session)

- 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 Only**), each carrying 5 marks. Total 20 marks.
- Part C: Total number of questions to be given are three, out of which student has to answer any two. They are numerical answer type / fully elaborative type (**Not More Than 70 Words For Question Only**)*, each carrying 10 marks. Total 20 marks.

* LIST OF ELABORATIVE THEORY QUESTION SUBJECTS: 1 FY1 - 04 Communication Skills (Cr 2), 1 FY1 - 05 Human Values (Cr 2), 2 FY1 - 04 Communication Skills (Cr 2), 2 FY1 - 05 Human Values (Cr 2), 3 AN1 - 02 Technical Communication (Cr 2), 4 MH1 - 02 Technical Communications (Cr 2), 4 MH1 - 03 Economics and Financial Accounting (Cr 2), 5 AN5 - 12 Aircraft Maintenance Practices (Cr 2), 6 AN3 - 01 Mechanics of Composite Materials (Cr 2), 6 AN5 - 12 Aircraft Rules and Regulation (Cr 2), 6 MH3 - 01 Automobile Engineering (Cr 2).

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

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 & Student Details

Mid Term	Mid Term 3	Date of Submission	29/09/2020
Name of Faculty	Mr. Manbir Singh	Date of Examination	03/10/2020
Course	B.Tech (Mechatronics Engineering)	Semester	SEMESTER : 5
Batch	Fourth (4)	Subject	5 MH5 - 13 CNC Technology (Cr 2)

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	<p>5MH5 -13 CNC Technology (credit-2)</p> <p>COURSE OBJECTIVE</p> <ol style="list-style-type: none">To read and interpret part drawings and design callouts correctlyUnderstand fundamentals of NC/CNC MachineUnderstand to manually program correctly a CNC machineDemonstrates a working knowledge of programs including conversation of M&G codesLearn NC Programming through CAD/CAMUnderstand hand tool used in cnc machinedemonstrate knowledge of tool holders by selecting the correct holder for a range of tools.Learn Maintenance and Trouble Shooting of CNC Machine Tools. <p>COURSE OUTCOME</p> <ol style="list-style-type: none">Able to read and measure part drawings and design callouts correctly without supervision. In terms of complexityAble to Understand fundamentals of NC/CNC Machine for producing quality productAble to interpret manually program correctly a CNC machine to reduced wasteCapable to use conversation of M&G codes by reading the program and knowing what action the machine intends to take thereby confirming the intended action.Able to use NC Programming through CAD/CAM and able to produce as per designAble to use hand tools as required during operating of cnc machineCapable to gain proper knowledge of tool holder and work holding device to reduce the chance of accident.
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8. Able to proper functioning Maintenance and Trouble Shooting of CNC Machine Tools to maintained market demand in time.

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Student Name		Student Reg No.	

Part A			
Question : 1	What are function of DNC machine ?		
Lesson Plan No. - 3	Topic - DNC machine	Source - CNC Technology by P. Radhakrishanan	CO No. - 2
Question : 2	What is Machining centre ?		
Lesson Plan No. - 4	Topic - Machining centre	Source - CNC Technology by P. Radhakrishanan	CO No. - 1
Question : 3	What is cnc system.		
Lesson Plan No. - 5	Topic - cnc system.	Source - CNC Technology by P. Radhakrishanan	CO No. - 2
Question : 4	What is the full meaning of CNC machine?		
Lesson Plan No. - 5	Topic - cnc system.	Source - CNC Technology by P. Radhakrishanan	CO No. - 2
Question : 5	Explain the derive mechanism		
Lesson Plan No. - 6	Topic - derive mechanism	Source - CNC Technology by P. Radhakrishanan	CO No. - 2
Question : 6	Describe the feed drive		
Lesson Plan No. - 7	Topic - derive mechanism	Source - CNC Technology by P. Radhakrishanan	CO No. - 2
Question : 7	What is the function M-30 and m-03code ?		
Lesson Plan No. - 19	Topic - G and M code	Source - CNC Technology by P. Radhakrishanan	CO No. - 4
Question : 8	What is Tool compensation in CNC?		
Lesson Plan No. - 24	Topic - Tool compensation	Source - CNC Technology by P. Radhakrishanan	CO No. - 6
Question : 9	What are CNC machine tools?		
Lesson Plan No. - 25	Topic - CNC machine tools	Source - CNC Technology by P. Radhakrishanan	CO No. - 6
Question : 10	What is the machine control unit?		

Lesson Plan No. - 12	Topic - CNC machine tools	Source - CNC Technology by P. Radhakrishanan	CO No. - 6
Part B			
Question : 1	What is ball screw in CNC machine?		
Lesson Plan No. - 10	Topic - ball screw in CNC	Source - CNC Technology by P. Radhakrishanan	CO No. - 2
Question : 2	What is CAD CAM advantages and disadvantages?		
Lesson Plan No. - 23	Topic - CAD CAM advantages	Source - CNC Technology by P. Radhakrishanan	CO No. - 5
Question : 3	What are the requirements in selection of tools for CNC machining ?		
Lesson Plan No. - 24	Topic - selection of tools for CNC	Source - CNC Technology by P. Radhakrishanan	CO No. - 6
Question : 4	How many types of CNC tools are there?		
Lesson Plan No. - 8	Topic - types of CNC tools	Source - CNC Technology by P. Radhakrishanan	CO No. - 6
Question : 5	What are the NC motion control systems?		
Lesson Plan No. - 9	Topic - NC motion control systems	Source - CNC Technology by P. Radhakrishanan	CO No. - 2
Question : 6	Explain the programming features of cnc machine.		
Lesson Plan No. - 14	Topic - programming features of cnc	Source - CNC Technology by P. Radhakrishanan	CO No. - 3
Part C			
Question : 1	Explain the types of measuring system in cnc machines		
Lesson Plan No. - 16	Topic - measuring system in cnc	Source - CNC Technology by P. Radhakrishanan	CO No. - 3
Question : 2	What is NC part programming ? explain coordinate and angular data		
Lesson Plan No. - 20	Topic - NC part programming	Source - CNC Technology by P. Radhakrishanan	CO No. - 3
Question : 3	Describe in detail introduction to computer automated part programming.		
Lesson Plan No. - 22	Topic - computer automated part programming.	Source - CNC Technology by P. Radhakrishanan	CO No. - 5
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.



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