



GENERAL INSTRUCTIONS TO THE CANDIDATES

- Candidates are instructed to answer the questions as per Bloom's Taxonomy knowledge level (K_1 to K_6)
- Candidates are strictly instructed not to write anything in the question paper other than their roll number.
- Candidates should search their pockets, desks and benches and handover to the Hall Superintendent/Invigilator if any paper, book or note which they may find therein as soon as they enter the examination hall.
- Candidates are not permitted to bring electronic watches with memory, laptop computers, personal systems, walkie-talkie sets, paging devices, mobile phones, cameras, recording systems or any other gadget / device /object that would be of unfair assistance to him / her.
- Corrective measures as per KCT examination policies will be imposed for malpractice in the hall like copying from any papers, books or notes and attempting to elicit the answer from neighbours.

B.E DEGREE EXAMINATIONS: DEC 2015

(Regulation 2014)

Third Semester

MECHANICAL ENGINEERING

U14MET304: Machine Drawing

Time: Four Hours

Maximum Marks: 100

Answer all the Questions:-

PART A (10 x 1 = 10 Marks)

1.	Working drawing is used by		CO1	[K ₁]
	a)	General public	b)	Sales man
	c)	Designer	d)	Manufacturing industry
2.	A drawing giving details about size tolerance, heat treatment, etc. is known as		CO1	[K ₁]
	a)	Production drawing	b)	Assembly drawing
	c)	Exploded drawing	d)	Machine drawing
3.	Morse taper is used to define		CO1	[K ₁]
	a)	Difference in diameter per unit length	b)	Angle of a line
	c)	Code used in dimensioning	d)	Slope of a line

4.	Superimposed dimension is simplified method of				CO1	[K ₁]
	a)	Chain dimensioning	b)	Parallel dimensioning		
	c)	Combined dimensioning	d)	Tabular dimensioning		
5.	Sectional views are drawn to				CO1	[K ₁]
	a)	Show internal details	b)	Section the object in two halves		
	c)	Section the object in one quarter	d)	Hide external details		
6.	Sequence the following manufacturing processes based on increasing surface roughness 1) Sand casting 2) Cold rolling 3) Hot rolling 4) Hand grinding				CO2	[K ₁]
	a)	1, 2, 3, 4	b)	1, 4, 3, 2		
	c)	2, 3, 4, 1	d)	4, 3, 2, 1		
7.	Broken out section is used to show				CO2	[K ₁]
	a)	External and internal details for the entire length	b)	Very long object		
	c)	External and internal details for a portion of length	d)	Small objects shown broken		
8.	Caulking and fullering is done to				CO3	[K ₁]
	a)	Round the sharp edges	b)	Increase the strength of the joint		
	c)	Make the joint leak proof	d)	Make the joint compact		
9.	A protected flange coupling is better than other couplings with regards to				COL	[K _L]
	a)	Fire hazards	b)	Safety		
	c)	Protection from dirt and water	d)	Security		
10.	Match List I with List II and select the correct answer using the codes given below the lists:				CO2	[K ₁]
	List I		List II			
	A. Interference fit		i. Size of hole is kept constant and shaft size is varied			
	B. Clearance fit		ii. Size of shaft is kept constant and hole size is varied			
	C. Shaft basis system		iii. Maximum shaft dimension < Minimum hole dimension			
	D. Hole basis system		iv. Maximum Hole size < Minimum Shaft size			

	A	B	C	D
a)	1	2	4	3
b)	3	4	2	1
c)	4	3	2	1
d)	3	4	1	2

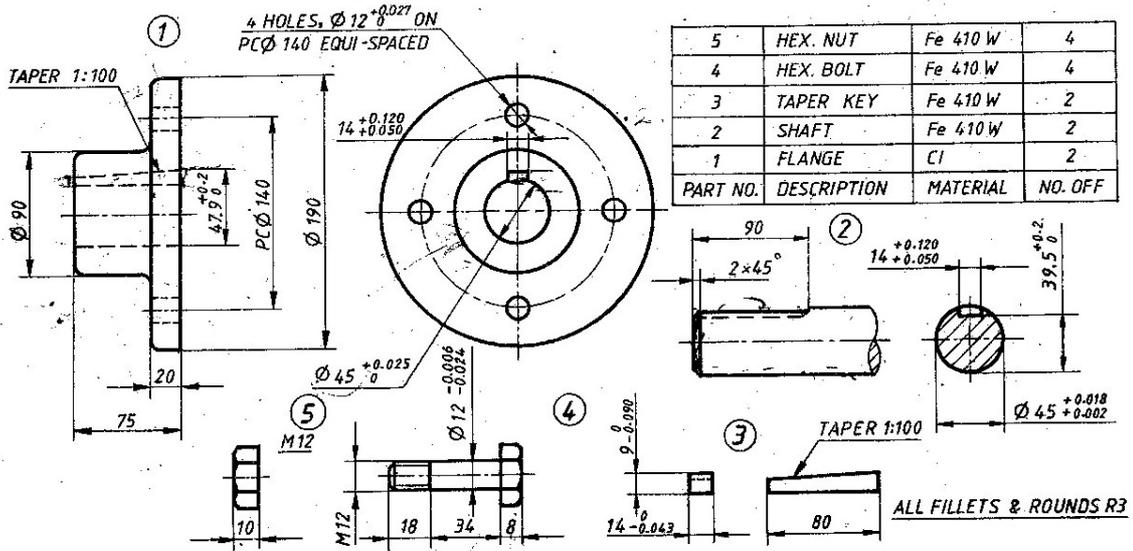
PART B (1 x 30 = 30 Marks)

11.	The details of a flange coupling are shown in Figure 1 with all parts; draw the sectional front view of the flange coupling with all parts assembled. (30 marks)	CO3	[K ₂]
12.	The details of a knuckle joint are shown in Figure 2; draw the sectional front view of the knuckle joint with all parts assembled. (30 marks)	CO3	[K ₂]

Answer any ONE Question:-

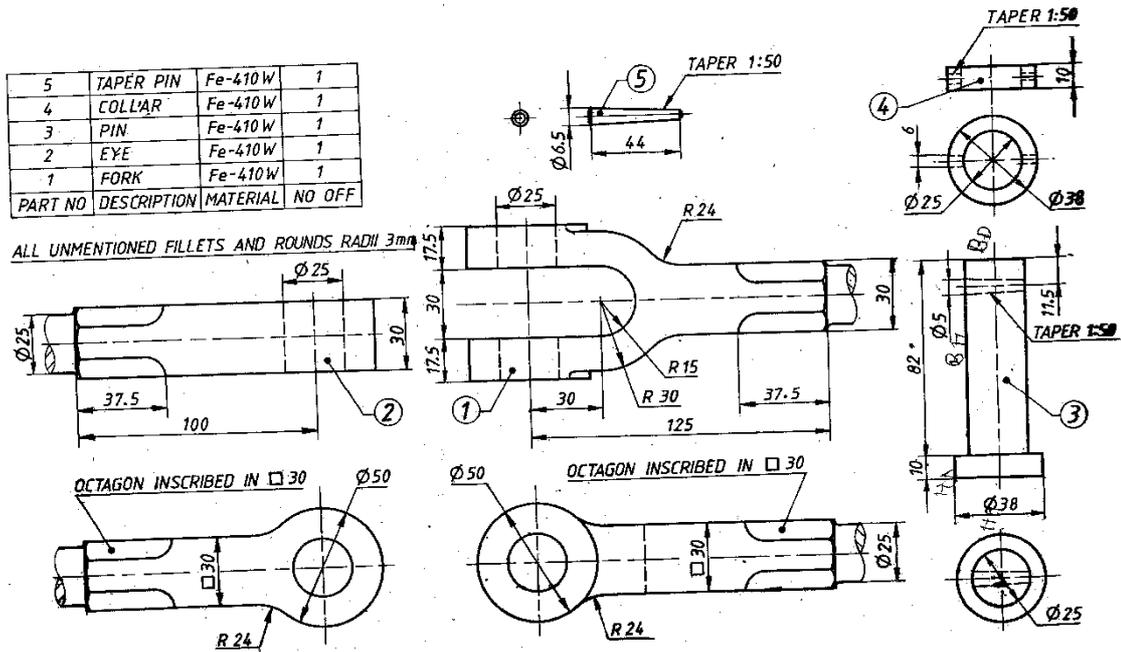
PART C (1 x 60 = 60 Marks)

21.	The details of a Tool Head of shaping machine are shown in Figure 3 and Figure 4 with all parts assembled, draw the following views of the tool head. (i) Sectional front view (40 marks) (ii) Top view (20 marks)	CO5	[K ₂]
22.	The details of a Tail stock shown in Figure 5 with all parts assembled draw the following views of the tail stock. (i) Sectional front view (40 marks) (ii) Top view (20 marks)	CO5	[K ₂]



All Dimensions in mm
 Details of Flanged Coupling — Unprotected Type

Figure 1 Parts of flange coupling



Details of a Knuckle Joint

Figure 2 Parts of Knuckle Joint

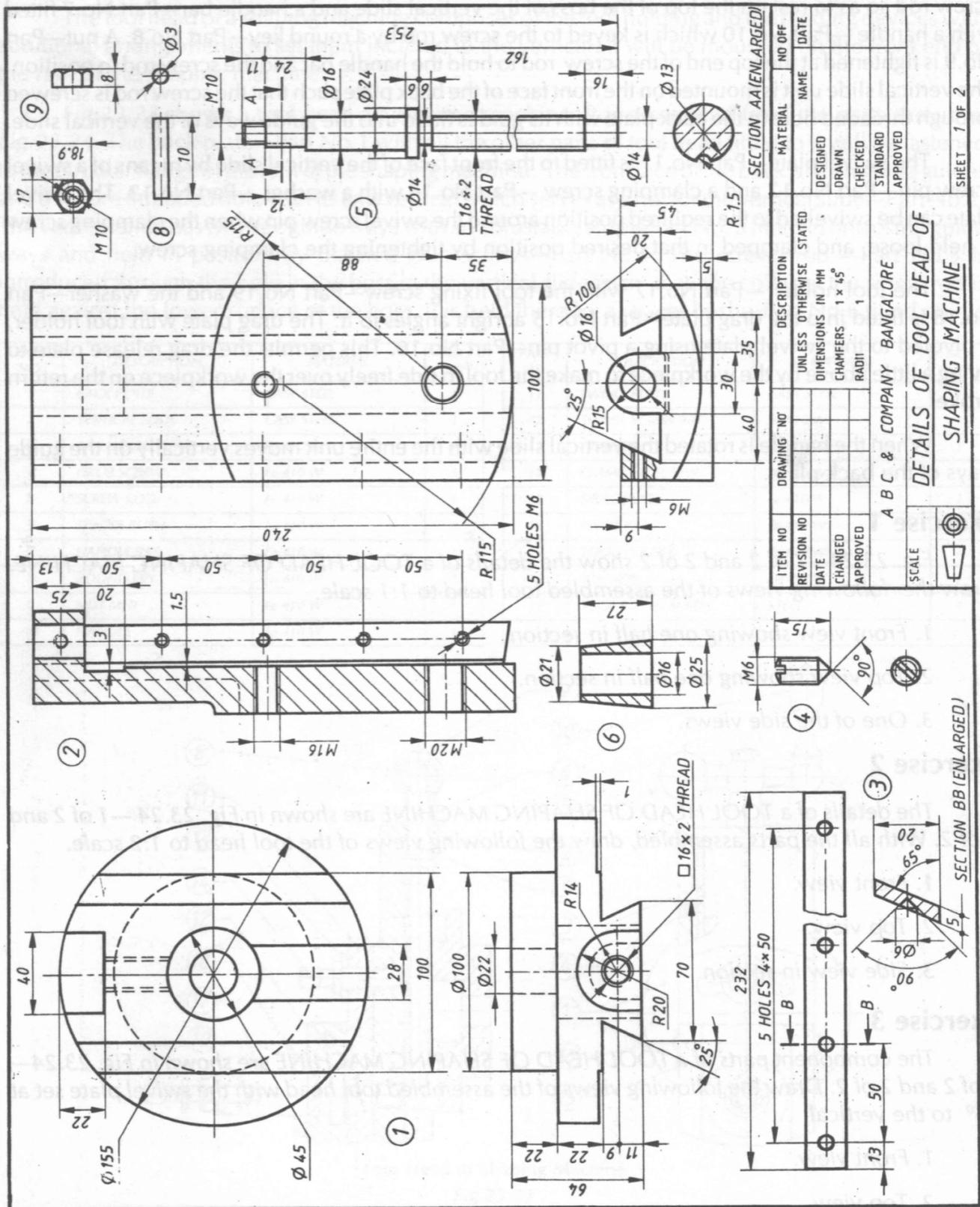


Figure 4 Parts of tool head shaper (2 of 2)

