DIRECTORATE FOR QUALITY AND STANDARDS IN EDUCATION
Department of Curriculum Management
Educational Assessment Unit

Annual Examinations for Secondary Schools 2014

FORM 3 (3rd Year) GRAPHICAL COMMUNICATION   MARKING SCHEME

Orthographic View

Question No. 1 (a)   **End View**

constructing / drawing a regular pentagon on given base XY	3	
constructing the R10 radiused corner	1	
drawing the hidden lines of the cylindrical handle	1	
drawing the hidden lines of the material thickness	1	
drawing centre line / neatness / accuracy	1	
Total marks for question No. 1 (a)		**7**

Question No. 1 (b)   **Plan View**

projecting the necessary construction lines from the End and Plan views	1	
drawing rectangle 150mm X 81mm	1	
drawing / projecting the inner rectangle to denote material thickness	1	
drawing the cylindrical handle	1	
drawing the visible base	1	
drawing the hidden base	1	
drawing centre line / neatness / accuracy	1	
Total marks for question No. 1 (b)		**7**

Questions No. 1 (c), (d) and (e)   **Projection Symbol / Scale / Rendering**

c) stating and printing the correct projection angle (1st angle projection)	1	
d) 1st angle projection symbol	2	
e) rendering the toolbox	3	
Total marks for questions No. 1 (c), (d) and (e)		**6**
Total marks for question No. 1		**20**

FRONT VIEW   END VIEW   1 st ANGLE PROJECTION   PLAN   PROJECTION SYMBOL
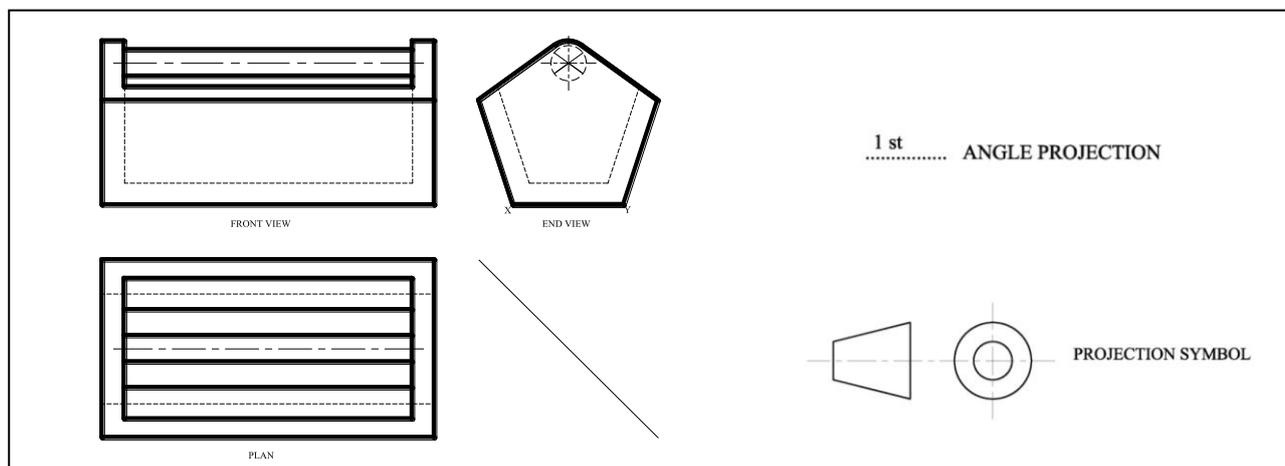
Question No. 2 **Tangential Arcs**

|		
constructing the hexagon on the given centre lines	4	
drawing the R12 semi-circle	1	
drawing two parallel lines tangential with the R12 semi-circle	1	
drawing the R40 arc	1	
locating the centres and drawing the R20 arcs touching the corners of the hexagon and tangential with the R40 arc	3	
locating centres and drawing the R20 arcs tangential with lines and the R40 arc	3	
presentation / neatness and accuracy	2	
Total marks for question No. 2		**15**

Question No. 3 **Ellipse**

constructing ellipse having a major axis of 80mm and minor axis 52mm	7	
locating the focal points	1	
constructing tangent at point Q	3	
joining line PS	1	
colouring the handles	2	
neatness and accuracy	1	
Total marks for question No. 3		**15**
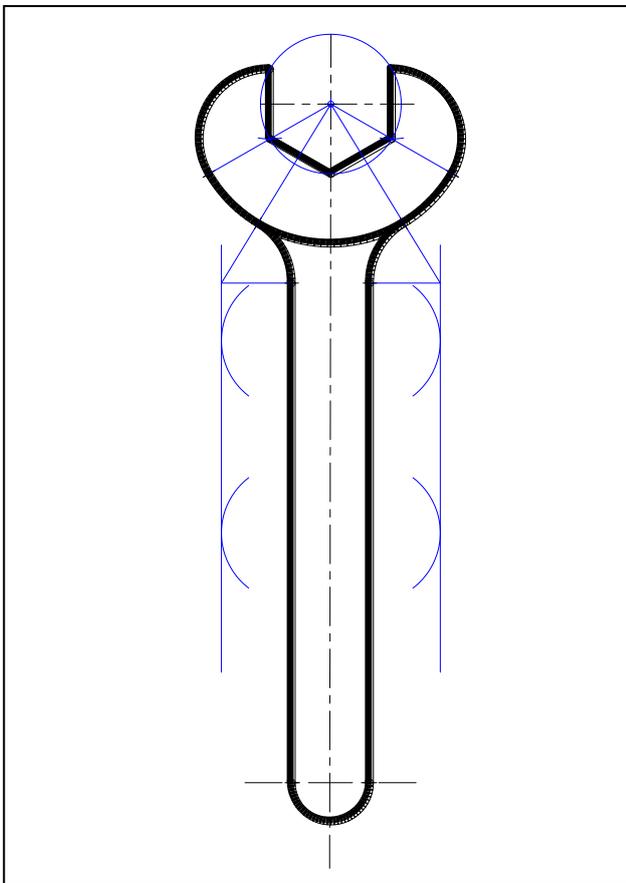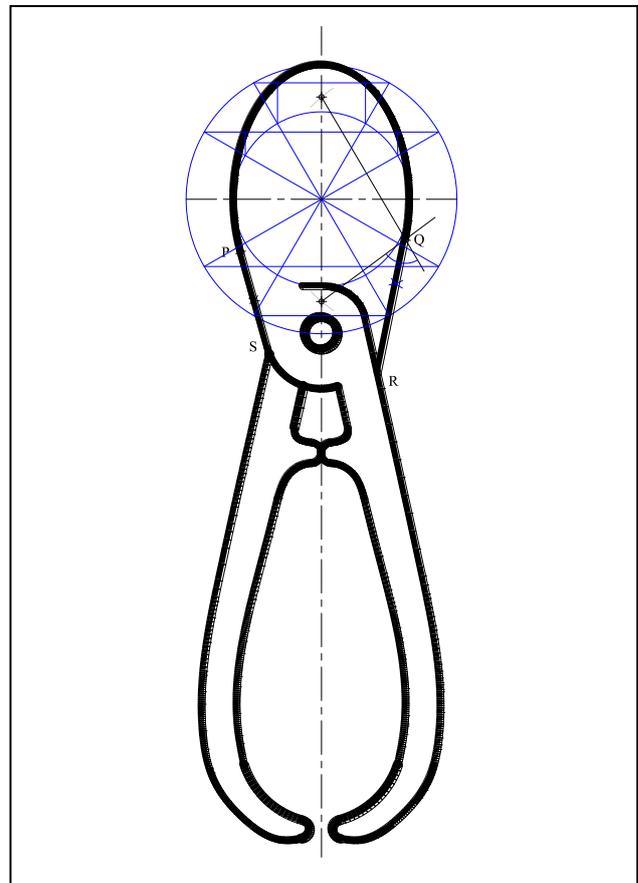
Question 2   Question 3

Question No. 4 **Oblique**

drawing the R30 front circle on the given centre lines	2	
drawing the R10 front circle on the given centre lines	2	
drawing the 45° axis	1	
locating centres and drawing the three other R30 part-circles	3	
locating centre and drawing the R20 semi-circle	2	
drawing the 45° lines to complete the drawing	1	
neatness and presentation	1	
Total marks for question No. 4		**12**

Question No. 5 **Tangents**

drawing the R20 circle	1	
drawing the R25 circle	1	
drawing the R15 circle	1	
drawing the R25 circle	1	
constructing tangent between the R20 and R25 circles	3	
constructing tangent between the R15 and R25 circles	3	
constructing tangent between point P and the R15 circle	3	
presentation / neatness	1	
Total marks for question No. 5		**14**

OBLIQUE VIEW
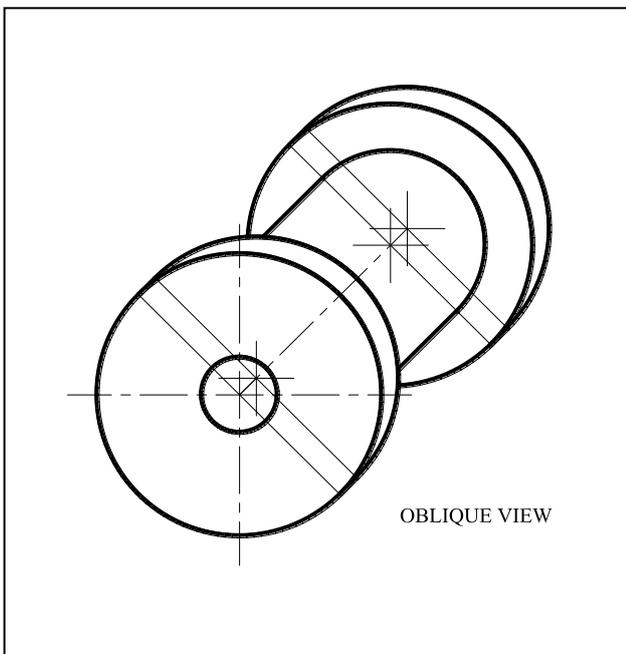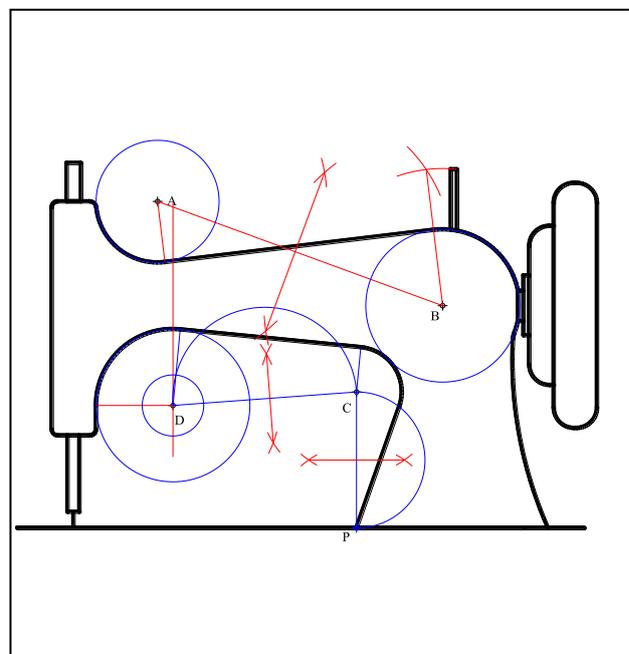
Question 4

Question 5

Question No. 6 **Mandatory Sign**
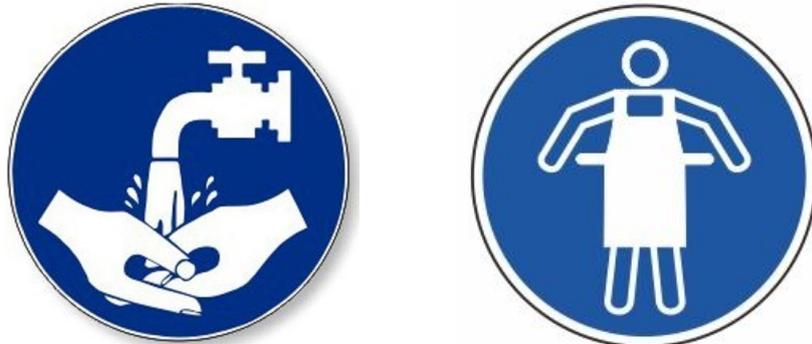
drawing the preparatory sketches	2	
drawing the final realization of the mandatory sign	5	
colouring the sign as per standard regulations using blue colour	2	
neatness and presentation	1	
Total marks for question No. 6		**10**

Question No. 7 **Surface Development**

dividing the circular plan into a number of equal parts	1	
projecting the divisions to the front elevation	1	
converging the generators to the apex	1	
projecting intersecting points to the plan view	1	
locating the intersecting points in the plan	1	
lining in the plan with a smooth curve	1	
using the appropriate construction to determine the true lengths	1	
drawing a minor sector to form the surface development	1	
stepping off arcs to determine the circumference of the circle	1	
drawing radials converging to point A	1	
transfering the true lengths from the front to the surface development	2	
lining in with a smooth curve	1	
neatness and accuracy	1	
Total marks for question No. 7		**14**

Question 6

Question 7

FRONT ELEVATION

PLAN

SURFACE DEVELOPMENT