



<b>Id</b>	<b>1</b>
<b>Question</b>	Which of the following statements are true?  1. Mechanical comparators are compact and easy to handle 2. Parallax error is never observed in mechanical comparator 3. Sigma comparator is a type of mechanical comparator 4. Mechanical comparators have low inertia which makes them sensitive to vibrations
<b>A</b>	<b>1 and 2</b>
<b>B</b>	<b>3 and 4</b>
<b>C</b>	<b>1 and 3</b>
<b>D</b>	<b>All of the above</b>
<b>Marks</b>	1.5
<b>Unit</b>	1

<b>Id</b>	<b>2</b>
Question	Overall magnification of optical comparators is given as,
A	<b><math>(4 d / f) \times (\text{magnification of eye piece})</math></b>
B	<b><math>(2 f / d) \times (\text{magnification of eye piece})</math></b>
C	<b><math>(4 f / d) \times (\text{magnification of eye piece})</math></b>
D	<b><math>(2 d / f) \times (\text{magnification of eye piece})</math></b>
Marks	1.5
Unit	1

<b>Id</b>	<b>3</b>
<b>Question</b>	<b>Which of the following statements is true for LVDT?</b>
A	It is a mutual capacitive transducer
B	Presence of hysteresis gives high repeatability
C	It can measure displacement and pressure
D	All of the above
<b>Marks</b>	<b>1.5</b>
<b>Unit</b>	<b>1</b>

<b>Id</b>	<b>4</b>
<b>Question</b>	<p>The sensitivity of back pressure air gauge is given by the relation shown below, what does <math>\delta R / \delta p_2</math> signify?</p> $(\delta R / \delta t) = (\delta A_m / \delta t) \times (\delta R / \delta p_2) \times (\delta p_2 / \delta A_m)$
<b>A</b>	Pneumatic sensitivity
<b>B</b>	Sensitivity of pressure gauge
<b>C</b>	Overall magnification
<b>D</b>	Measuring head sensitivity
<b>Marks</b>	1.5
<b>Unit</b>	1

<b>Id</b>	<b>5</b>
Question	Error of measurement =
A	True value – Measured value
B	Precision – True value
C	Measured value – Precision
D	None of the above
Marks	1.5
Unit	1

<b>Id</b>	<b>6</b>
<b>Question</b>	The modern metre is,
<b>A</b>	the length of the path travelled by light in vacuum during a time interval of $1/29,97,92,458$ of a second
<b>B</b>	$16,50,763.73 \times$ wavelengths of the red–orange radiation of a krypton 86 atom in vacuum
<b>C</b>	the length of the path travelled by light in vacuum during a time interval of $1/399,792,458$ of a second
<b>D</b>	$1,660,793.73 \times$ wavelengths of the red–orange radiation of a krypton 86 atom in vacuum
<b>Marks</b>	1.5
<b>Unit</b>	1

<b>Id</b>	<b>7</b>
Question	Alignment with the axis of measurement is easy in end standards because they possess
A	parallax effect
B	high accuracy
C	airy points
D	a built-in datum
Marks	1.5
Unit	1



<b>Id</b>	<b>8</b>
Question	A line standard is transferred to an end standard by using
A	a composite line standard
B	a built-in datum
C	workshop standards
D	airy points
Marks	1.5
Unit	1

<b>Id</b>	<b>9</b>
<b>Question</b>	Subdivision of end standards is carried out using
<b>A</b>	Crook's level comparator
<b>B</b>	Brookes level comparator
<b>C</b>	Johansson Mikrokator
<b>D</b>	Sigma electronic comparator
<b>Marks</b>	1.5
<b>Unit</b>	1

<b>Id</b>	<b>10</b>
Question	When airy points support a length standard at two points, they will be apart by a distance of
A	0.577L
B	0.575L
C	0.757L
D	0.775L
Marks	1.5
Unit	1

<b>Id</b>	<b>11</b>
Question	Which one of following is true?
A	Line standard does not have parallax error.
B	End standard does not have parallax error
C	Both line and end standards have parallax error.
D	Both line and end standards do not have parallax error.
Marks	1.5
Unit	1

<b>Id</b>	<b>12</b>
<b>Question</b>	Both line and end standards are initially calibrated at
<b>A</b>	$18 \pm 1 \text{ } ^\circ\text{C}$
<b>B</b>	$18 \pm \frac{1}{2} \text{ } ^\circ\text{C}$
<b>C</b>	$20 \pm \frac{1}{2} \text{ } ^\circ\text{C}$
<b>D</b>	$20 \pm 1 \text{ } ^\circ\text{C}$
<b>Marks</b>	1.5
<b>Unit</b>	1

<b>Id</b>	<b>13</b>
Question	When a measurement is made between two flat parallel surfaces, it is called
A	line measurement
B	direct measurement
C	standard measurement
D	end measurement
Marks	1.5
Unit	1

<b>Id</b>	<b>14</b>
Question	In a line standard, distance is measured between
A	two flat parallel surfaces
B	Two engraved lines
C	Two points
D	Two inclined surfaces
Marks	1.5
Unit	1

<b>Id</b>	<b>15</b>
Question	Which of the following statements are true?  1. Mechanical comparators are compact and easy to handle 2. Parallax error is never observed in mechanical comparator 3. Sigma comparator is a type of mechanical comparator 4. Mechanical comparators have low inertia which makes them sensitive to vibrations
A	1 and 2
B	3 and 4
C	1 and 3
D	All of the above
Marks	1.5
Unit	1



<b>Id</b>	<b>16</b>
Question	Wringing of slip gauges is used in
A	Line measurement
B	Primary standards
C	Both line and end measurements
D	End measurement
Marks	1.5
Unit	1

<b>Id</b>	<b>17</b>
<b>Question</b>	Comparison of the characteristics of line and end standards clearly shows that the accuracy
<b>A</b>	In line standard is greater than in end standard
<b>B</b>	In end standard is greater than in line standard
<b>C</b>	of both are equal
<b>D</b>	Cannot be determined by the comparison of characteristics only
<b>Marks</b>	1.5
<b>Unit</b>	1

<b>Id</b>	<b>18</b>
Question	In the hierarchical classification of standards, the accuracy in the standards
A	is degraded
B	is improved
C	does not change
D	is not related to hierarchical classifications
Marks	1.5
Unit	1

<b>Id</b>	<b>19</b>
<b>Question</b>	<b>The principle of operation of LVDT is based on the variation of</b>
A	Self inductance
B	Mutual inductance
C	Reluctance
D	Permanence
<b>Marks</b>	<b>1.5</b>
<b>Unit</b>	<b>1</b>

<b>Id</b>	<b>20</b>
Question	A scale in which the distance between graduations is proportional to the value of that graduation is called
A	Equidistant scale
B	Regular Scale
C	Linear scale
D	Non-linear scale
Marks	1.5
Unit	1

<b>Id</b>	<b>21</b>
Question	Which of the following could be the source of random error in an instrument?
A	Friction in instrument movement
B	Hysteresis in elastic members
C	Mechanical vibrations
D	Any of the above
Marks	1.5
Unit	1

<b>Id</b>	<b>22</b>
<b>Question</b>	If a measuring tape is too long as compared to standard, the error will be known as
<b>A</b>	Instrumental error
<b>B</b>	Personal error
<b>C</b>	Natural error
<b>D</b>	Manufacturing error
<b>Marks</b>	1.5
<b>Unit</b>	1

<b>Id</b>	<b>23</b>
<b>Question</b>	<b>How is interference between shaft and hole calculated?</b>
A	Interference = maximum shaft – minimum hole
B	Interference = minimum shaft – maximum hole
C	Interference = minimum shaft + maximum hole
D	None of the above
Marks	1.5
Unit	2



<b>Id</b>	<b>24</b>
Question	Quality control charts doesn't depend on which factor?
A	Normal distribution
B	Random sampling
C	Independence between samples
D	Binomial distribution
Marks	1.5
Unit	2

<b>Id</b>	<b>25</b>
<b>Question</b>	Which of the following is incorrect about tolerances?
<b>A</b>	Too loose tolerance results in less cost
<b>B</b>	Tolerance is a compromise between accuracy and ability
<b>C</b>	Too tight tolerance may result in excessive cost
<b>D</b>	Fit between mating components is decided by functional requirements
<b>Marks</b>	1.5
<b>Unit</b>	2

<b>Id</b>	<b>26</b>
Question	Why tolerances are given to the parts?
A	Because it's impossible to make perfect settings
B	To reduce weight of the component
C	To reduce cost of the assembly
D	To reduce amount of material used
Marks	1.5
Unit	2

<b>Id</b>	<b>27</b>
<b>Question</b>	In an interchangeable assembly, the holes of size $25.000_{0.000}^{+0.040}$ mm mate with shafts of size $25.000_{0.000}^{+0.020}$ mm. The maximum possible clearance in the assembly will be
<b>A</b>	0.010 mm
<b>B</b>	0.020 mm
<b>C</b>	0.030 mm
<b>D</b>	0.040 mm
<b>Marks</b>	1.5
<b>Unit</b>	2

<b>Id</b>	<b>28</b>
Question	Which type of tolerance provided in drilling mostly?
A	Bilateral
B	Unilateral
C	Trilateral
D	Compound
Marks	1.5
Unit	2

<b>Id</b>	<b>29</b>
Question	According to Taylors principle, No Go gauge checks
A	Only one feature at a time
B	Only important dimensions at a time
C	All the dimensions at a time
D	Only the related dimensions at a time
Marks	1.5
Unit	2

<b>Id</b>	<b>30</b>
Question	Following is the theoretical size which is common to both the parts of a mating pair
A	Normal size
B	Actual size
C	Base size
D	All of the above
Marks	1.5
Unit	2

<b>Id</b>	<b>31</b>
Question	Tolerances are said to be ____
A	limits of natural variability
B	Statistical limits of variability
C	Limits determined by the customers of the product
D	Limits of inherent process variability
Marks	1.5
Unit	2



<b>Id</b>	<b>32</b>
<b>Question</b>	In order to have a clearance fit, it is essential that the upper limit of the shaft should be
<b>A</b>	greater than the upper limit of the hole
<b>B</b>	lesser than the upper limit of the hole
<b>C</b>	greater than the lower limit of the hole
<b>D</b>	lesser than the lower limit of the hole
<b>Marks</b>	1.5
<b>Unit</b>	2

<b>Id</b>	<b>33</b>
<b>Question</b>	A shaft is specified as $50_{0.000}^{0.050}$ mm. The mating hole has a clearance fit with minimum clearance of 0.01mm. The tolerance on the hole is 0.04 mm. The maximum clearance in mm between the hole and the shaft is
A	0.05 mm
B	0.01 mm
C	0.50 mm
D	0.10 mm
<b>Marks</b>	1.5
<b>Unit</b>	2

<b>Id</b>	<b>34</b>
Question	Which of the following instruments can be used for most precision measurement of the thickness of a thin sheet?
A	Linear scale
B	Vernier caliper
C	Micrometer
D	Combination set
Marks	1.5
Unit	2

<b>Id</b>	<b>35</b>
Question	A metric vernier caliper is having 25 divisions on vernier scale which matches with 24 divisions of main scale. If one main scale division is 0.5 mm, the least count of the vernier caliper is
A	0.02 mm
B	0.01 mm
C	0.005 mm
D	0.001 mm
Marks	1.5
Unit	2

<b>Id</b>	<b>36</b>
Question	A ratchet screw in micrometer is provided to
A	lock the reading measured
B	maintain constant pressure on the job
C	prevent wearing of screw threads
D	allow zero adjustment
Marks	1.5
Unit	2

<b>Id</b>	<b>37</b>
<b>Question</b>	Which of the following measuring instruments is most accurate?
<b>A</b>	Vernier caliper
<b>B</b>	Slip gauges
<b>C</b>	Sine bar
<b>D</b>	Autocollimator
<b>Marks</b>	1.5
<b>Unit</b>	2

<b>Id</b>	<b>38</b>
Question	Which of the following is not provided on combination set?
A	Square head
B	Center head
C	Bevel protractor
D	Vernier caliper
Marks	1.5
Unit	2

<b>Id</b>	<b>39</b>
Question	A universal surface gauge is commonly employed for
A	scribing parallel lines at desired heights from the plane surface
B	comparing the correctness of two similar heights
C	locating centers of round rod held in V-block
D	all of the above
Marks	1.5
Unit	2



<b>Id</b>	<b>40</b>
Question	The standard length of a sine bar is measured between
A	outer edges of the bar
B	inner edges of the bar
C	outer circumferences of the rollers
D	centers of the rollers
Marks	1.5
Unit	2

<b>Id</b>	<b>41</b>
<b>Question</b>	The surface plates are usually made of gray cast iron due to its
<b>A</b>	high degree of flatness and rust free surface
<b>B</b>	least tendency to warp
<b>C</b>	free from residual stresses
<b>D</b>	lubrication by graphite flakes
<b>Marks</b>	1.5
<b>Unit</b>	2

<b>Id</b>	<b>42</b>
<b>Question</b>	The main advantage of vernier caliper over the micrometer is that
<b>A</b>	it can be easily used and provides for quick measurements
<b>B</b>	it is more accurate
<b>C</b>	it is more rigid
<b>D</b>	it can be used for both external and internal measurements
<b>Marks</b>	1.5
<b>Unit</b>	2

<b>Id</b>	<b>43</b>
Question	A ring gauge is used to measure
A	outside diameter but not roundness
B	roundness but not outside diameter
C	both outside diameter and roundness
D	only external threads
Marks	1.5
Unit	2

<b>Id</b>	<b>44</b>
<b>Question</b>	Plug gauges are used to check
<b>A</b>	accuracy of holes
<b>B</b>	diameter of solid shafts
<b>C</b>	length of holes
<b>D</b>	all of the above
<b>Marks</b>	1.5
<b>Unit</b>	2

<b>Id</b>	<b>45</b>
Question	Snap gauges are used for checking
A	internal diameter of hollow shafts
B	diameters of holes
C	external diameter of shafts
D	all of the above
Marks	1.5
Unit	2

<b>Id</b>	<b>46</b>
<b>Question</b>	Which one of the following processing sequences will give the best accuracy as well as surface finish?
<b>A</b>	Drilling, reaming, grinding
<b>B</b>	Drilling, boring, grinding
<b>C</b>	Drilling, reaming, lapping
<b>D</b>	Drilling, reaming, electroplating
<b>Marks</b>	1.5
<b>Unit</b>	2

<b>Id</b>	<b>47</b>
Question	Drilled holes and hone holes, could be designated in the following grades:
A	H8, H12
B	H6, H11
C	H6, H8
D	T8, H6
Marks	1.5
Unit	2



<b>Id</b>	<b>48</b>
Question	A universal precision gauge, also called planar gauge, is used for
A	setting planar and shaper cutting tools to establish the correct depth of the cut
B	measurement of parallel faces in a slot
C	height gauge using a dial test indicator
D	all of the above
Marks	1.5
Unit	2

<b>Id</b>	<b>49</b>
<b>Question</b>	The symmetrical spacing of the airy points of a bar of length L is
<b>A</b>	$L/\sqrt{2}$
<b>B</b>	$L/\sqrt{3}$
<b>C</b>	$L\sqrt{3}$
<b>D</b>	$L\sqrt{2}$
<b>Marks</b>	1.5
<b>Unit</b>	2

<b>Id</b>	<b>50</b>
Question	Feeler gauges are mostly used in engineering to measure
A	the clearance between two parts
B	radius of circular plates
C	surface roughness
D	thread dimensions
Marks	1.5
Unit	2

<b>Id</b>	<b>51</b>
Question	Which device is mainly used for locating the center of round bars held in V-block by drawing straight lines and by tilting the job through different angle?
A	Surface gauge
B	Surface plate
C	Angle plate
D	Center plate
Marks	1.5
Unit	2

<b>Id</b>	<b>52</b>
Question	Ideal surface roughness, as measured by the maximum height of unevenness, is best achieved when the material is removed by
A	an end mill
B	a grinding wheel
C	a tool with zero nose radius
D	a ball mill
Marks	1.5
Unit	2

<b>Id</b>	<b>53</b>
<b>Question</b>	In turning operation, the feed could be doubled to increase the metal removal rate. To keep the same level of surface finish, the nose radius of the tool should be
<b>A</b>	halved
<b>B</b>	kept unchanged
<b>C</b>	doubled
<b>D</b>	made four times
<b>Marks</b>	1.5
<b>Unit</b>	2

<b>Id</b>	<b>54</b>
Question	In a system of limits and fit specification, the fundamental tolerances indicate the
A	fundamental deviation of the part
B	minimum size permitted for the part
C	maximum size permitted for part
D	degree of accuracy of manufacturing
Marks	1.5
Unit	2

<b>Id</b>	<b>55</b>
Question	The fit indicates
A	degree of tightness or looseness between mating members
B	minimum clearance space between mating parts
C	maximum clearance space between mating parts
D	tolerances in the mating parts
Marks	1.5
Unit	2



<b>Id</b>	<b>56</b>
Question	For tolerance grade IT7, the value of tolerance is related to standard tolerance unit $i$ as,
A	$7i$
B	$16i$
C	$21i$
D	$40i$
Marks	1.5
Unit	2

<b>Id</b>	<b>57</b>
Question	Optical micrometer is used to measure
A	small angular displacements
B	small linear displacements
C	surface roughness
D	surface profiles
Marks	1.5
Unit	2

<b>Id</b>	<b>58</b>
Question	A bevel protractor is used for
A	angular displacements
B	linear displacements
C	flatness measurements
D	surface roughness
Marks	1.5
Unit	2

<b>Id</b>	<b>59</b>
Question	In the specification of dimensions and fits,
A	allowance is equal to bilateral tolerance
B	allowance is equal to unilateral tolerance
C	allowance is independent of tolerance
D	allowance is equal to the difference between maximum and minimum dimension specified by the tolerance.
Marks	1.5
Unit	2

<b>Id</b>	<b>60</b>
Question	Select the correct statement about comparators.
A	Comparators cannot be used as an absolute measuring device.
B	It is possible to use dial indicator as a comparator.
C	Both (a) and (b)
D	None of the above
Marks	1.5
Unit	2

<b>Id</b>	<b>61</b>
Question	Thread micrometer is used to measure
A	pitch
B	root
C	outside diameter
D	all of the above
Marks	1.5
Unit	2

<b>Id</b>	<b>62</b>
Question	Select the wrong statement about tools of linear measurements
A	The least count of vernier caliper is determined by dividing the smallest division on the main scale by the total number of divisions on the vernier scale
B	The least count of micrometer is determined by dividing the pitch of the screw by total number of divisions on the thimble.
C	both (a) and (b)
D	none of the above
Marks	1.5
Unit	2

<b>Id</b>	<b>63</b>
Question	If a clearance fit is present between shaft and hole, what is the tolerance on shaft or hole for a complete interchangeable approach?
A	$\frac{1}{2}$ of maximum clearance – $\frac{1}{2}$ of minimum clearance
B	$\frac{1}{4}$ of maximum clearance – $\frac{1}{4}$ of minimum clearance
C	Maximum clearance – minimum clearance
D	$\frac{3}{4}$ of maximum clearance – $\frac{3}{4}$ of minimum clearance
Marks	1.5
Unit	3



<b>Id</b>	<b>64</b>
<b>Question</b>	<b>In V-shape method, the minor diameter of thread is given by,</b>
A	$D \pm (d2 - d1)$
B	$D \pm (d1 - d2)$
C	$D \pm (d2 + d1)$
D	None of the above  Where, D = Diameter of cylindrical gauge, d1 = micrometer reading of cylindrical gauge, d2 = micrometer reading of threads, d = minor diameter
<b>Marks</b>	1.5
<b>Unit</b>	3

<b>Id</b>	<b>65</b>
Question	The following method(s) is (are) used to measure the minor diameter of internal threads
A	Taper parallels methods
B	Calibrated rollers methods
C	both 'a' and 'b'
D	None of the above
Marks	1.5
Unit	3

<b>Id</b>	<b>66</b>
Question	What is dedendum for external threads?
A	Radial distance between pitch and minor cylinder
B	Radial distance between major and pitch cylinder
C	Radial distance between major and minor cylinder
D	Axial distance between major and pitch cylinder
Marks	1.5
Unit	3

<b>Id</b>	<b>67</b>
Question	Which of the following is not true about the axial thickness of screw thread?
A	Measured in direction perpendicular to the axis of thread
B	Measured on pitch cylinder
C	Distance between opposite faces of same thread
D	Measured at the same thread
Marks	1.5
Unit	3

<b>Id</b>	<b>68</b>
Question	Which of the following is true for the multiple start screw threads?
A	It is produced by a single helical groove
B	Grooves should be different in spacing
C	It gives a quick transverse
D	It is formed in a transverse section on a cylinder
Marks	1.5
Unit	3

<b>Id</b>	<b>69</b>
Question	Which of the following is not true about effective diameter?
A	Also known as pitch diameter
B	It decides quality of fit between nut and screw
C	This is the diameter of minor cylinder
D	It is a very important dimension for screw threads
Marks	1.5
Unit	3

<b>Id</b>	<b>70</b>
<b>Question</b>	Which of the following is not a name of the major diameter of an external thread?
<b>A</b>	Outside diameter
<b>B</b>	Crest diameter
<b>C</b>	Full diameter
<b>D</b>	Cone diameter
<b>Marks</b>	1.5
<b>Unit</b>	3

<b>Id</b>	<b>71</b>
<b>Question</b>	<b>Why are pitch errors observed in threads?</b>
A	Lack of inspection
B	Incorrect ratio of tool work velocity
C	Interference between mating parts
D	All of the above
Marks	1.5
Unit	3



<b>Id</b>	<b>72</b>
Question	<b>Which type of errors show linear relation between cumulative pitch error and length of thread?</b>
A	Periodic errors
B	Progressive errors
C	Both a. and b.
D	None of the above
Marks	1.5
Unit	3

<b>Id</b>	<b>73</b>
<b>Question</b>	Profile of a gear tooth is to be checked. Which one of following device would you choose?
<b>A</b>	Optical Pyrometer
<b>B</b>	Bench Micrometer
<b>C</b>	Sine Bar
<b>D</b>	Optical Projector
<b>Marks</b>	1.5
<b>Unit</b>	3

<b>Id</b>	<b>74</b>
<b>Question</b>	The involute profile of a spur gear is limited to only the
<b>A</b>	root circle
<b>B</b>	base circle
<b>C</b>	pitch circle
<b>D</b>	addendum circle
<b>Marks</b>	1.5
<b>Unit</b>	3

<b>Id</b>	<b>75</b>
Question	The angle between the line of action and the common tangent to the pitch circles is known as
A	flank angle
B	tooth angle
C	included angle
D	pressure angle
Marks	1.5
Unit	3

<b>Id</b>	<b>76</b>
Question	The path traced by a point on a circle that is rolling on a straight line without slipping is
A	involute
B	cycloid
C	epicycloid
D	hypocycloid
Marks	1.5
Unit	3

<b>Id</b>	<b>77</b>
Question	The tooth profile of mating gears is kept uniformly thinned, which results in a small play between mating tooth surfaces. This is called
A	backlash
B	pitch correction
C	lead correction
D	none of these
Marks	1.5
Unit	3

<b>Id</b>	<b>78</b>
Question	In order to measure the chordal thickness of a gear using a gear calliper, the position of the blade is set to
A	the entire depth of the gear tooth
B	addendum of the gear tooth
C	dedendum of the gear tooth
D	top surface of the gear tooth
Marks	1.5
Unit	3

<b>Id</b>	<b>79</b>
<b>Question</b>	Which of the following is the tester in which the gear being inspected is made to mesh with a standard gear and a dial indicator is used to capture the radial errors?
<b>A</b>	Pitch-checking instrument
<b>B</b>	Johnson gear tester
<b>C</b>	Parkinson gear tester
<b>D</b>	McMillan gear tester
<b>Marks</b>	1.5
<b>Unit</b>	3



<b>Id</b>	<b>80</b>
Question	The angle formed between a flank of the thread and the perpendicular to the axis of the thread, which passes through the vertex of the fundamental triangle, is called
A	a helix angle
B	a flank angle
C	a lead angle
D	an included angle
Marks	1.5
Unit	3

<b>Id</b>	<b>81</b>
<b>Question</b>	The indicator that enables the application of a pressure already decided upon on the screw thread in a bench micrometer is called
<b>A</b>	a fiducial indicator
<b>B</b>	a pressure indicator
<b>C</b>	a span indicator
<b>D</b>	none of these
<b>Marks</b>	1.5
<b>Unit</b>	3

<b>Id</b>	<b>82</b>
<b>Question</b>	In wire methods, the diameter of the wire selected should be such that it makes contact with the screw along the
<b>A</b>	outer diameter
<b>B</b>	pitch cylinder
<b>C</b>	root diameter
<b>D</b>	axis of the screw
<b>Marks</b>	1.5
<b>Unit</b>	3

<b>Id</b>	<b>83</b>
<b>Question</b>	In a two-wire method, diameter of the best-size wire is given by
<b>A</b>	$d = (p/2) \sec (x/2)$
<b>B</b>	$d = (p/4) \sec (x/2)$
<b>C</b>	$d = (p/2) \operatorname{cosec} (x/2)$
<b>D</b>	$d = (p/2) \cot (x/2)$
<b>Marks</b>	1.5
<b>Unit</b>	3

<b>Id</b>	<b>84</b>
Question	The pitch error that occurs whenever the tool– work velocity ratio is incorrect but constant is referred to as a
A	cyclic error
B	velocity error
C	progressive error
D	non-progressive error
Marks	1.5
Unit	3

<b>Id</b>	<b>85</b>
<b>Question</b>	In which of the following cases is the pitch measured parallel to the thread axis correct, but the threads are not cut to a true helix?
<b>A</b>	Drunken threads
<b>B</b>	Sunken threads
<b>C</b>	Whitworth threads
<b>D</b>	Metric threads
<b>Marks</b>	1.5
<b>Unit</b>	3

<b>Id</b>	<b>86</b>
Question	The two methods of inspecting screw threads are
A	inspection by constants and variables
B	inspection by variables and attributes
C	inspection by quality and cost
D	inspection of attributes and constants
Marks	1.5
Unit	3

<b>Id</b>	<b>87</b>
<b>Question</b>	Thread gauges that are used to inspect external thread forms are called
<b>A</b>	plug screw gauges
<b>B</b>	ring screw gauges
<b>C</b>	external screw gauges
<b>D</b>	all of these
<b>Marks</b>	1.5
<b>Unit</b>	3



<b>Id</b>	<b>88</b>
Question	A NOT GO screw gauge will primarily check for
A	outer diameter and nothing else
B	inside diameter and nothing else
C	effective diameter and nothing else
D	all of these
Marks	1.5
Unit	3

<b>Id</b>	<b>89</b>
Question	While setting Quality objective, _____ to be considered.
A	Material quality
B	Customer need
C	Market demand
D	All of the above
Marks	1.5
Unit	4

<b>Id</b>	<b>90</b>
<b>Question</b>	<b>Which among the following depicts positive and negative relation between driving factor and performance factor?</b>
A	Scatter diagram
B	Histogram
C	Check sheet
D	None of the above
<b>Marks</b>	1.5
<b>Unit</b>	4

<b>Id</b>	<b>91</b>
<b>Question</b>	<b>Which of the following is the limitation of Quality circle?</b>
A	Higher cost
B	Training time and cost
C	Development of leadership
D	All of the above
<b>Marks</b>	1.5
<b>Unit</b>	4

<b>Id</b>	<b>92</b>
Question	The four categories of costs associated with product quality costs are:
A	External failure, internal failure, prevention, and carrying.
B	External failure, internal failure, prevention, and appraisal.
C	External failure, internal failure, training, and appraisal.
D	Warranty, product liability, training, and appraisal.
Marks	1.5
Unit	4

<b>Id</b>	<b>93</b>
Question	Drawing control charts requires
A	Calculation of statistics from data
B	Adjusting the machines
C	Teamwork training of workers
D	Top management involvement
Marks	1.5
Unit	4

<b>Id</b>	<b>94</b>
Question	Inspection assures that
A	The process is in control
B	Workers are motivated
C	Product meets specification
D	Quality problems are solved
Marks	1.5
Unit	4

<b>Id</b>	<b>95</b>
Question	A control chart displays
A	Whether workers are motivated
B	Top management takes interest in quality
C	Inspectors are doing their job
D	Process variability
Marks	1.5
Unit	4



<b>Id</b>	<b>96</b>
Question	Flow charts indicate
A	Causes of process variation
B	The kind of forms to fill out
C	Who reports to whom
D	How inputs get processed into outputs
Marks	1.5
Unit	4

<b>Id</b>	<b>97</b>
Question	A sampling plan helps in
A	Keeping the process in control
B	Keeping workers motivated
C	Rejecting lots that are of unacceptable quality
D	Tuning the machines
Marks	1.5
Unit	4

<b>Id</b>	<b>98</b>
Question	An example of a random cause is _____
A	Absenteeism
B	Shortage of material supplies
C	Photocopy machine failure
D	Small vibrations in the equipment
Marks	1.5
Unit	4

<b>Id</b>	<b>99</b>
Question	Process Diagnosis determines
A	If the workers are doing their job
B	The possible cause of a failure
C	If control charts are in control
D	When top management should talk to vendors
Marks	1.5
Unit	4

<b>Id</b>	<b>100</b>
Question	Seven tools include
A	Team meetings
B	Management meeting regularly with workers
C	Workers' toolkit
D	Histogram
Marks	1.5
Unit	4

<b>Id</b>	<b>101</b>
Question	A Pareto chart shows
A	That the process is in control
B	The vital few from the trivial many
C	Process capability
D	A line drawn as production proceeds
Marks	1.5
Unit	4

<b>Id</b>	<b>102</b>
Question	Service quality cannot be managed when
A	No vendors are involved
B	Consultants are not consulted
C	Workers don't meet regularly with management
D	Customer expectations are not known
Marks	1.5
Unit	4

<b>Id</b>	<b>103</b>
Question	Cause-effect diagram is used in
A	Problem identification
B	Field visits
C	Problem analysis
D	Vendor surveys
Marks	1.5
Unit	4



<b>Id</b>	<b>104</b>
Question	Cost of quality is really
A	A way to prioritize actions
B	Cost of production
C	Cost of sales
D	Cost of high-quality products
Marks	1.5
Unit	4

<b>Id</b>	<b>105</b>
Question	Accuracy implies
A	We know customer targets
B	Computerized machines
C	Average performance is on target
D	All products are of same size
Marks	1.5
Unit	4

<b>Id</b>	<b>106</b>
Question	Six Sigma implies
A	A statistical method
B	A trouble-shooting method
C	Teams are effective
D	3 defects per million in output
Marks	1.5
Unit	4

<b>Id</b>	<b>107</b>
Question	Process Flow Charts help explain
A	Process steps and their relationship
B	Cost of quality
C	A clause in ISO 9000
D	Customer complaints
Marks	1.5
Unit	4

<b>Id</b>	<b>108</b>
Question	Quality control does not apply to
A	Drawing flow charts
B	Drawing control charts
C	Driving
D	Idea generation
Marks	1.5
Unit	4

<b>Id</b>	<b>109</b>
Question	Quality is a problem because
A	Workers don't do the job
B	It is expensive to control
C	All processes have some variation
D	Modern processes are too complex
Marks	1.5
Unit	4

<b>Id</b>	<b>110</b>
Question	Six sigma requires
A	Process knowledge
B	Action on causes of defects
C	DOE trials
D	All above
Marks	1.5
Unit	4

<b>Id</b>	<b>111</b>
Question	Cost of quality is affected by
A	Calibration of instruments
B	Field failures
C	Preventive actions
D	All above
Marks	1.5
Unit	4



<b>Id</b>	<b>112</b>
Question	The graphical representation of the total frequencies of occurrence of each type of defects type against the various defect types will be called as _____
A	Check sheet
B	Pareto chart
C	Histogram
D	Control charts
Marks	1.5
Unit	4

<b>Id</b>	<b>113</b>
Question	In Cause and Effect diagram, what procedure is adopted?
A	First defects are identified and then the corresponding effects on working of product is determined
B	First defects in a product are identified and then, the corresponding causes are discovered
C	First causes of defects are plotted then the effects of them, i.e. defects are identified
D	Causes and their effects are identified simultaneously
Marks	1.5
Unit	4

<b>Id</b>	<b>114</b>
Question	Which of these is a useful plot for identifying a potential relationship between two variables of a process?
A	Pareto chart
B	Defect concentration diagram
C	Scatter diagram
D	Stem and Leaf plot
Marks	1.5
Unit	4

<b>Id</b>	<b>115</b>
Question	Scatter diagram is a technique used in _____ step of DMAIC process.
A	Define
B	Analyze
C	Improve
D	Control
Marks	1.5
Unit	4

<b>Id</b>	<b>116</b>
Question	Which of these is not a part of magnificent seven of SPC?
A	Pareto chart
B	Check Sheet
C	Scatter Diagram
D	2k factorial design
Marks	1.5
Unit	4

<b>Id</b>	<b>117</b>
Question	Check sheet shows _____
A	If a process part is completed
B	If the process components are all checked
C	If the samples of the process are checked
D	Time oriented summary of defects
Marks	1.5
Unit	4

<b>Id</b>	<b>118</b>
Question	Pareto chart is invented by from Italian economist _____
A	Alfred Pareto
B	Vilfred Pareto
C	Jon Pareto
D	Paulo Pareto
Marks	1.5
Unit	4

<b>Id</b>	<b>119</b>
<b>Question</b>	Match the following A. Circle symbol                    1. Data analysis tool B. Pareto analysis is                2. Average of reading C. X bar means                        3. Beginning or end of operation D. LCT means                         4. Lower control limit
<b>A</b>	A-3, B-2, C-1, D-4
<b>B</b>	A-3, B-1, C-2, D-4
<b>C</b>	A-1, B-3, C-2, D-4
<b>D</b>	A-3, B-1, C-4, D-2
<b>Marks</b>	1.5
<b>Unit</b>	4



<b>Id</b>	<b>120</b>
Question	In a fishbone diagram, some potential causes to consider are
A	Materials
B	Process
C	People
D	All of the above
Marks	1.5
Unit	4

<b>Id</b>	<b>121</b>
Question	A control chart typically does not show which of the following values?
A	Upper control limit
B	Outer limit
C	Target line
D	Any of the above
Marks	1.5
Unit	4

<b>Id</b>	<b>122</b>
Question	The costs incurred in assessing the level of quality attained by the operating system are
A	Internal failure costs
B	Appraisal costs
C	External failure costs
D	Prevention costs
Marks	1.5
Unit	4

<b>Id</b>	<b>123</b>
Question	The analysis tool for a quality problem that involves selecting the problem, identifying the major categories of potential causes, and associating likely specific causes is
A	Pareto charts
B	Fishbone diagrams
C	Checklists
D	Scatter diagrams
Marks	1.5
Unit	4

<b>Id</b>	<b>124</b>
<b>Question</b>	<p>Match the following,</p> <p>A. Quality approach            1. Productivity quality – cost -Delivery  B. Pillar of TQM                    2. Continual improvement management  C. Need for TQM is due        3. Employee  D. TQM focuses on                4. Cut throat competition</p> <p>The correct order is,</p>
<b>A</b>	A-2, B-1, C-4, D-3
<b>B</b>	A-1, B-2, C-4, D-3
<b>C</b>	A-2, B-1, C-3, D-4
<b>D</b>	A-2, B-4, C-1, D-3
<b>Marks</b>	1.5
<b>Unit</b>	5

<b>Id</b>	<b>125</b>
<b>Question</b>	<p>Match the following</p> <p>A. How TQM helps in reducing cost                      1. By reducing external sale  B. Calibration activity carried in company is            2. Prevention cost  C. Quality planning is                                              3. Appraisal cost  D. Vender assessment is                                            4. Appraisal cost</p>
<b>A</b>	A-4, B-1, C-2, D-3
<b>B</b>	A-1, B-4, C-3, D-2
<b>C</b>	A-1, B-2, C-4, D-3
<b>D</b>	A-1, B-4, C-2, D-3
<b>Marks</b>	1.5
<b>Unit</b>	5

<b>Id</b>	<b>126</b>
<b>Question</b>	The customer requirement to be reviewed, i Before supply of product ii. After supply of product iii. Before commitment of supply of product  The Correct Answer is,
<b>A</b>	i & ii
<b>B</b>	i & iii
<b>C</b>	ii & iii
<b>D</b>	None of the above
<b>Marks</b>	1.5
<b>Unit</b>	5

<b>Id</b>	<b>127</b>
<b>Question</b>	<b>Does TQM approach have relevance to Indian industry in context to,</b> i. Customer satisfaction ii. People involvement iii. Policy management  The correct answer is,
<b>A</b>	i only
<b>B</b>	i & ii
<b>C</b>	ii & iii
<b>D</b>	i, ii & iii
<b>Marks</b>	1.5
<b>Unit</b>	5



<b>Id</b>	<b>128</b>
<b>Question</b>	Continual improvement is in, i. Environmental objective ii. Audit Result iii. Corrective action The Correct Answer is,
<b>A</b>	i & ii
<b>B</b>	i & iii
<b>C</b>	i, ii & iii
<b>D</b>	None of the above
<b>Marks</b>	1.5
<b>Unit</b>	5

<b>Id</b>	<b>129</b>
<b>Question</b>	<b>TQM &amp; ISO both focuses on</b>
A	Customer
B	Employee
C	Supplier
D	All of the above
<b>Marks</b>	<b>1.5</b>
<b>Unit</b>	<b>5</b>

<b>Id</b>	<b>130</b>
Question	In the context of TQM, which of the following statements is wrong?
A	It is purely a technical discipline addressed at the operator level
B	It has been largely influenced by the seven quality gurus
C	It is a customer-centric approach
D	It involves all departments/groups in the organization at all levels
Marks	1.5
Unit	5

<b>Id</b>	<b>131</b>
Question	When all line personnel are expected to stop their moving production line in case of any abnormality and, along with their supervisor, suggest an improvement to resolve the abnormality, it may initiate a
A	poka-yoke
B	JIT
C	kaizen
D	Deming rule
Marks	1.5
Unit	5

<b>Id</b>	<b>132</b>
Question	Poka-yoke, a Japanese word, means
A	mistake proofing
B	team spirit
C	customer is the king
D	zero defects
Marks	1.5
Unit	5

<b>Id</b>	<b>133</b>
Question	In a just-in-time (JIT) production system, materials are produced
A	only at the time when they are needed
B	only for required quantity
C	both (a) and (b)
D	none of the above
Marks	1.5
Unit	5

<b>Id</b>	<b>134</b>
Question	Quality function deployment turns
A	Customer attributes into engineering attributes
B	Engineering attributes into customer attributes
C	Customer attributes into organizations attributes
D	None of the above
Marks	1.5
Unit	5

<b>Id</b>	<b>135</b>
Question	Total Quality Management (TQM) focuses on
A	Employee
B	Customer
C	Both (a) and (b)
D	None of the above
Marks	1.5
Unit	5



<b>Id</b>	<b>136</b>
Question	Which of the following is responsible for quality objective?
A	Top level management
B	Middle level management
C	Frontline management
D	All of the above
Marks	1.5
Unit	5

<b>Id</b>	<b>137</b>
Question	TQM & ISO both focuses on
A	Customer
B	Employee
C	Supplier
D	All of the above
Marks	1.5
Unit	5

<b>Id</b>	<b>138</b>
Question	While setting Quality objective, _____ to be considered.
A	Material quality
B	Customer need
C	Market demand
D	All of the above
Marks	1.5
Unit	5

<b>Id</b>	<b>139</b>	
<b>Question</b>	<b>Match the following</b>	
	A. Quality approach	1. Productivity quality – cost -Delivery
	B. Pillar of TQM	2. Continual improvement management
	C. Need for TQM is due	3. Employee
	D. TQM focuses on	4. Cut throat competition
A	A-2, B-1, C-4, D-3	
B	A-1, B-2, C-4, D-3	
C	A-2, B-1, C-3, D-4	
D	A-2, B-4, C-1, D-3	
<b>Marks</b>	1.5	
<b>Unit</b>	5	

<b>Id</b>	<b>140</b>	
<b>Question</b>	<b>Match the following</b>	
	A. How TQM helps in reducing cost	1. By reducing external sale
	B. Calibration activity carried in company is	2. Prevention cost
	C. Quality planning is	3. Appraisal cost
	D. Vender assessment is	4. Appraisal cost
<b>A</b>	A-4, B-1, C-2, D-3	
<b>B</b>	A-1, B-4, C-3, D-2	
<b>C</b>	A-1, B-2, C-4, D-3	
<b>D</b>	A-1, B-4, C-2, D-3	
<b>Marks</b>	1.5	
<b>Unit</b>	5	

<b>Id</b>	<b>141</b>
<b>Question</b>	<b>The main business process objective(s) are</b> i. Customer service ii. Profit & loss iii. Employee satisfaction  The Correct Answer is,
<b>A</b>	i only
<b>B</b>	i & ii
<b>C</b>	i, ii & iii
<b>D</b>	None of the above
<b>Marks</b>	1.5
<b>Unit</b>	5

Id	142
Question	The customer requirement to be reviewed i. Before supply of product ii. After supply of product iii. Before commitment of supply of product  The Correct Answer is,
A	i & ii
B	i & iii
C	ii & iii
D	None of the above
Marks	1.5
Unit	5

Id	143
Question	Continual improvement is in i Environmental objective ii. Audit Result iii. Corrective action  The Correct Answer is,
A	i & ii
B	i & iii
C	i, ii & iii
D	None of the above
Marks	1.5
Unit	5



<b>Id</b>	<b>144</b>
Question	Which of the following is correct for TQM?
A	Quality strategy in TQM emanates from top
B	TQM is a static process
C	It is a management approach to short-term success through customer
D	It is used to improve processes not products
Marks	1.5
Unit	5

<b>Id</b>	<b>145</b>
Question	Which part in quality management is the critical part?
A	Process thinking
B	Performance measurement
C	Customer's view
D	Systematic approach
Marks	1.5
Unit	5

<b>Id</b>	<b>146</b>
Question	Which of the following is not true for communication in TQM?
A	Three way communication
B	It should be clear
C	Forceful
D	Open involvement
Marks	1.5
Unit	5

<b>Id</b>	<b>147</b>
Question	What are the core principles of the TQM in a company-wide effort?
A	Customer and process orientation only
B	Continuous improvement only
C	Process orientation and continuous improvement only
D	Continuous improvement, process and customer orientation
Marks	1.5
Unit	5

<b>Id</b>	<b>148</b>
Question	Which drivers are used in TQM system?
A	Competition, Survival and export drive
B	Teamwork participation and customer satisfaction
C	Quality tools and technique
D	Management commitment and vision
Marks	1.5
Unit	5

<b>Id</b>	<b>149</b>
Question	What is included in the quality assessment in TQM?
A	Strategic quality planning
B	Management of process quality
C	Quality and operational results
D	Information and analysis
Marks	1.5
Unit	5

<b>Id</b>	<b>150</b>
Question	Which factor is the basis of Decision making in TQM?
A	Facts only
B	Opinions only
C	Facts and opinions both
D	Neither facts nor opinions
Marks	1.5
Unit	5

<b>Id</b>	<b>151</b>
Question	When a manager monitors the work performance of workers in his department to determine if the quality of their work is 'up to standard', this manager is engaging in which function?
A	Planning
B	Controlling
C	Organizing
D	Leading
Marks	1.5
Unit	5



<b>Id</b>	<b>152</b>
Question	What do you call the understanding of a dominant culture before choosing a suitable control system?
A	Market control
B	Bureaucratic control
C	Clan control
D	People control
Marks	1.5
Unit	5

<b>Id</b>	<b>153</b>
Question	What is the first step in a control process?
A	Allocate resources
B	Choose key personnel for the task
C	Select a strategy
D	Set standards
Marks	1.5
Unit	5

<b>Id</b>	<b>154</b>
Question	What is the weakest form of control?
A	Pre-control
B	Simultaneous control
C	Post-control
D	Duel control
Marks	1.5
Unit	5

<b>Id</b>	<b>155</b>
Question	Improving quality through small, incremental improvements is a characteristic of what type of quality management system?
A	Just-in-time
B	Six Sigma
C	Total Quality Management
D	Kaizen
Marks	1.5
Unit	5

<b>Id</b>	<b>156</b>
Question	Where was Total Quality Management first developed?
A	USA
B	UK
C	Japan
D	Korea
Marks	1.5
Unit	5

<b>Id</b>	<b>157</b>
Question	Which of the following are key components of a Total Quality Management system?
A	Individual responsibility, incremental improvement, use of raw data
B	Collective responsibility, continual improvement, use of raw data
C	Group responsibility, staged improvement, knowledge
D	Involves everyone, continual improvement, use of data and knowledge
Marks	1.5
Unit	5

<b>Id</b>	<b>158</b>
Question	What is the term for the monitoring of events both internal and external to the organisation that affects strategy?
A	Operational control
B	Strategic surveillance
C	Strategic control
D	Environmental scanning
Marks	1.5
Unit	5

<b>Id</b>	<b>159</b>
Question	What are the main characteristics of an effective control system?
A	Flexibility, accuracy, timeliness and objectivity
B	Flexibility, measurability, timeliness and objectivity
C	Flexibility, accuracy, relevance and objectivity
D	Flexibility, accuracy, timeliness and relevance
Marks	1.5
Unit	5



<b>Id</b>	<b>160</b>
Question	Customers are primarily concerned with _____
A	Communication, courtesy, and credibility of the sales person
B	Competence, courtesy, and security of the sales person
C	Competence, responsiveness, and reliability of the sales person
D	Communication, responsiveness, and cleverness of the sales person
Marks	1.5
Unit	5

<b>Id</b>	<b>161</b>
Question	_____ is about supplying customers with what they want when they want it.
A	JUT
B	HET
C	JAT
D	JIT
Marks	1.5
Unit	5

<b>Id</b>	<b>162</b>
Question	Kaizen is a _____ process, the purpose of which goes beyond simple productivity improvement.
A	weekly
B	daily
C	monthly
D	annual
Marks	1.5
Unit	5

<b>Id</b>	<b>163</b>
Question	Poka-yoke" is the Japanese term for _____
A	Card
B	Fool proof
C	Continuous improvement
D	Fishbone diagram
Marks	1.5
Unit	5

<b>Id</b>	<b>164</b>
Question	Kaizen is a Japanese term meaning _____
A	continuous improvement
B	Just-in-time (JIT)
C	a fishbone diagram
D	setting standards
Marks	1.5
Unit	5

<b>Id</b>	<b>165</b>
Question	The Toyota Production System is based on two pillars namely _____ and _____.
A	Kaizen, Six Sigma
B	Lean, Six Sigma
C	Just in Time, Jidoka
D	Just in Time, Kaizen
Marks	1.5
Unit	5

<b>Id</b>	<b>166</b>
Question	For any process, the sample ranges are, 1.2,1.5,1.1,1.4,1.5. The subgroup size is 5. What will be the process standard deviation? Given: $d_2=2.326$ and $A_2=0.577$
A	0.576
B	2.322
C	0.511
D	2.463
Marks	1.5
Unit	6

<b>Id</b>	<b>167</b>
<b>Question</b>	The no-inspection alternative of sampling is used when ____
<b>A</b>	The supplier's process is so good that defective units are never encountered
<b>B</b>	The supplier's process is so bad that almost every unit is defective
<b>C</b>	The component is extremely critical
<b>D</b>	The component is moderately critical
<b>Marks</b>	1.5
<b>Unit</b>	6



<b>Id</b>	<b>168</b>
Question	Which of these is not a correct statement for Acceptance Sampling?
A	Concerned with inspection of products
B	Concerned with decision making regarding products
C	One of the oldest aspects of quality assurance
D	One of the oldest aspects of quality control
Marks	1.5
Unit	6

<b>Id</b>	<b>169</b>
Question	OC curve can be used to determine the probability of _____
A	Type I error
B	Type II error
C	Both type I and type II error
D	Neither type I nor type II error
Marks	1.5
Unit	6

<b>Id</b>	<b>170</b>
Question	In the horizontal axis of a control chart displays _____
A	Sample number
B	Time
C	Either sample number or time
D	Neither sample number or time
Marks	1.5
Unit	6

<b>Id</b>	<b>171</b>
Question	<b>ISO emphasis on</b>
A	Prevention
B	Inspection
C	Rejection
D	All of the above
Marks	1.5
Unit	6

<b>Id</b>	<b>172</b>
<b>Question</b>	In which of the following inspection system, the inspection keeps space with the production
<b>A</b>	Sampling inspection
<b>B</b>	Cent percent inspection
<b>C</b>	Cage inspection
<b>D</b>	Centralized inspection
<b>Marks</b>	1.5
<b>Unit</b>	6

<b>Id</b>	<b>173</b>
<b>Question</b>	The value of a set of data at which the greatest number of cases is concentrated is called
<b>A</b>	Mean
<b>B</b>	Median
<b>C</b>	Mode
<b>D</b>	Standard deviation
<b>Marks</b>	1.5
<b>Unit</b>	6

<b>Id</b>	<b>174</b>
Question	A variable quality characteristic will have both _____
A	a) Mean and variability
B	b) Discrete and continuous values
C	c) Zero and infinite value
D	d) One or zero
Marks	1.5
Unit	6

<b>Id</b>	<b>175</b>
<b>Question</b>	Quantities that can be numerically measured, can be plotted on a _____ control chart.
<b>A</b>	X bar
<b>B</b>	P chart
<b>C</b>	C chart
<b>D</b>	np chart
<b>Marks</b>	1.5
<b>Unit</b>	6



<b>Id</b>	<b>176</b>
Question	Which term is having a closest meaning as Sampling Distributions?
A	Control charts
B	On site inspection
C	Whole lot inspection
D	Acceptance sampling
Marks	1.5
Unit	6

<b>Id</b>	<b>177</b>
<b>Question</b>	Process capability generally uses _____
<b>A</b>	Specifications
<b>B</b>	Control Limits
<b>C</b>	Process standard deviation
<b>D</b>	Mean of any one sample
<b>Marks</b>	1.5
<b>Unit</b>	6

<b>Id</b>	<b>178</b>
<b>Question</b>	When R chart is out of control, we _____
<b>A</b>	Eliminate the out-of-control points and recalculate the control limits
<b>B</b>	Take one more sample and recalculate the control limits
<b>C</b>	Eliminate the out-of-control points and the nearest two points, and recalculate the control limits
<b>D</b>	Take no action
<b>Marks</b>	1.5
<b>Unit</b>	6

<b>Id</b>	<b>179</b>
Question	X bar chart monitors _____
A	Between-sample variability
B	Within-sample variability
C	Neither between-sample nor within-sample variability
D	Both between-sample variability and within-sample variability
Marks	1.5
Unit	6

<b>Id</b>	<b>180</b>
Question	The 3 sigma limits on x bar control charts imply that the type I error probability is _____
A	0.0012
B	0.0072
C	0.0027
D	0.0037
Marks	1.5
Unit	6

<b>Id</b>	<b>181</b>
Question	The assumption that links normality to the control charts is _____
A	The underlying distribution of the quality characteristic is normal
B	The normal mean will be equal to the process mean
C	The normal distribution is not the correct distribution for all the quality characteristic
D	Every distribution is a part of normal distribution
Marks	1.5
Unit	6

<b>Id</b>	<b>182</b>
Question	The probability of not detecting “an in-control shift” of the mean of the process is said to be the _____
A	$\alpha$ – Risk
B	$\beta$ – Risk
C	$\gamma$ – Risk
D	$\delta$ – Risk
Marks	1.5
Unit	6

<b>Id</b>	<b>183</b>
<b>Question</b>	If the sample size is 7 and the Average run length is 122 for a process, what will be the expected number of the individual units sampled?
<b>A</b>	850
<b>B</b>	854
<b>C</b>	867
<b>D</b>	844
<b>Marks</b>	1.5
<b>Unit</b>	6



<b>Id</b>	<b>184</b>
Question	If $\beta$ - risk of any process is 0.75, what will be the ARL for that process?
A	4
B	1.33
C	0.86
D	2
Marks	1.5
Unit	6

<b>Id</b>	<b>185</b>
Question	Slope of OC curve for $\bar{x}$ chart will _____ when sample size is increased.
A	Decrease
B	Increase
C	Remain same
D	Decrease then increase
Marks	1.5
Unit	6

<b>Id</b>	<b>186</b>
Question	If the probability of one point plotting out of control limits of a X bar control charts is 0.0143, what will be its expected number of individual units sampled with subgroup size 8?
A	559
B	544
C	530
D	580
Marks	1.5
Unit	6

<b>Id</b>	<b>187</b>
Question	Which of these should be plotted on the x bar chart?
A	Counts
B	Defects
C	Problems Solved
D	Measurements
Marks	1.5
Unit	6

<b>Id</b>	<b>188</b>
Question	What is the estimator of standard deviation in the $\bar{x}$ and R charts?
A	Mean of one sample
B	Mean of whole process
C	Range
D	Process capability ratio
Marks	1.5
Unit	6

<b>Id</b>	<b>189</b>
Question	What is an unbiased estimator of unknown variance of a probability distribution?
A	Sample mean
B	Sample standard deviation
C	Sample variance
D	Sample range
Marks	1.5
Unit	6

<b>Id</b>	<b>190</b>
Question	If the sample standard deviations for a process are 1.567, 1.429, 1.323, 1.525, 1.989, 1.457, what will be the mean standard deviation?
A	1.548
B	1.858
C	1.327
D	1.967
Marks	1.5
Unit	6

<b>Id</b>	<b>191</b>
Question	For mean of all sample standard deviations=0.0094 and the sample size= 5, what will be the estimate of process standard deviation?
A	100
B	0.01
C	0.0094
D	94
Marks	1.5
Unit	6



<b>Id</b>	<b>192</b>
Question	Which of this is a situation when $\bar{x}$ and $s$ charts should be utilized instead of $\bar{x}$ and $R$ charts?
A	When sample size is constant
B	When sample standard deviation is less than 1
C	When sample range is more than 1
D	When sample size is variable
Marks	1.5
Unit	6

<b>Id</b>	<b>193</b>
Question	In the case of individuals control charts, which of these is used?
A	Relative range
B	Process standard deviation
C	Mean of the highest observations
D	Moving range
Marks	1.5
Unit	6

<b>Id</b>	<b>194</b>
Question	Quality characteristics which are related to only conforming or non-conforming products, are called _____
A	Attributes
B	Continuous characteristics
C	Discrete characteristics
D	Variables
Marks	1.5
Unit	6

<b>Id</b>	<b>195</b>
Question	The control chart which relates to the fraction of defective product produced by a manufacturing process, is called _____
A	The control chart for nonconformities
B	Control charts for fraction nonconforming
C	Control charts for conformities per unit
D	Control chart for process mean
Marks	1.5
Unit	6

<b>Id</b>	<b>196</b>
<b>Question</b>	The control chart for fraction nonconforming is also called _____
<b>A</b>	u chart
<b>B</b>	c chart
<b>C</b>	p chart
<b>D</b>	R chart
<b>Marks</b>	1.5
<b>Unit</b>	6

<b>Id</b>	<b>197</b>
Question	The c charts are also called _____
A	The control chart for nonconformities
B	Control charts for fraction nonconforming
C	Control charts for conformities per unit
D	Control chart for process mean
Marks	1.5
Unit	6

<b>Id</b>	<b>198</b>
Question	The ratio of the number of nonconforming items in a population to total number of items in that population, is called _____
A	Fraction nonconforming
B	Fraction of nonconformities
C	Fraction of conformities per unit of product
D	Fraction of variability
Marks	1.5
Unit	6

<b>Id</b>	<b>199</b>
Question	The center line of control chart of fraction nonconforming represents the value equal to _____
A	Fraction nonconforming
B	Process mean
C	Process standard deviation
D	Sample mean
Marks	1.5
Unit	6



<b>Id</b>	<b>200</b>
Question	If there are 9 items defective in the sample size of 28, what will be the value that the fraction nonconforming chart, will represent?
A	0.2971
B	0.3214
C	0.6328
D	0.8172
Marks	1.5
Unit	6

<b>Id</b>	<b>201</b>
Question	What is done when there is a sample plotted out of control limits for a p-chart?
A	The sample is investigated for an assignable cause and then the sample data is eliminated to develop a new p-chart
B	The sample is only investigated for an assignable cause
C	The sample is not investigated at all (It is assumed that there was no assignable cause present)
D	All the samples are investigated
Marks	1.5
Unit	6

<b>Id</b>	<b>202</b>
Question	If the sample size for a p-chart is 50 and the value for the center line of the chart is 0.2313, what will be the value of the LCL of the chart?
A	0.4108
B	0.0524
C	0.0762
D	0.0389
Marks	1.5
Unit	6

<b>Id</b>	<b>203</b>
Question	Which of these is not one of the parameters which need to be specified for fraction nonconforming control charts?
A	Sample Size
B	Frequency of sampling
C	Width of control limits
D	Units to be produced
Marks	1.5
Unit	6

<b>Id</b>	<b>204</b>
Question	The center line for the control chart for nonconformities is representing the value equal $c$ , which is _____
A	The total number of nonconformities
B	The average number of conformities in a preliminary sample
C	The total number of nonconforming products
D	The total number of conforming products
Marks	1.5
Unit	6

<b>Id</b>	<b>205</b>
Question	If the average number of nonconformities per unit per sample is 0.074, what will be the lower control limit for the u-chart?
A	0.0414
B	0.0221
C	0.0
D	-0.0513
Marks	1.5
Unit	6

<b>Id</b>	<b>206</b>
Question	The OC curve of the c-chart is a curve which plots $\beta$ -risk against _____
A	Number of defectives per sample
B	True mean number of defects
C	Total number of defects
D	Demerits per unit
Marks	1.5
Unit	6