Bihar Public Service Commission, Patna									
Advt. No.-41/2025, Motor Vehicle Inspector									
Subject-**Mechanical Engineering,** Paper-II Exam Date: 10-08-2025									
Final Answer key, **Set-I**									
Q.No.	**Ans. Key**	**Q.No.**	**Ans. Key**	**Q.No.**	**Ans. Key**	**Q.No.**	**Ans. Key**	**Q.No.**	**Ans. Key**
1	C	21	D	41	C	61	C	81	Deleted
2	C	22	D	42	D	62	D	82	A
3	A	23	A	43	A	63	C	83	D
4	D	24	C	44	Deleted	64	D	84	B
5	C	25	C	45	A	65	B	85	C
6	A	26	B	46	A	66	B	86	C
7	C	27	C	47	C	67	B	87	A
8	A	28	A	48	B	68	A	88	C
9	C	29	C	49	C	69	B	89	C
10	C	30	C	50	B	70	A	90	A
11	D	31	B	51	B	71	A	91	D
12	A	32	Deleted	52	B	72	B	92	B
13	C	33	D	53	C	73	C	93	D
14	C	34	A	54	D	74	D	94	C
15	C	35	A	55	C	75	Deleted	95	C
16	C	36	D	56	C	76	A	96	B
17	D	37	C	57	C	77	B	97	C
18	A	38	D	58	A	78	B	98	B
19	B	39	D	59	B	79	D	99	D
20	C	40	D	60	B	80	A	100	A

Bihar Public Service Commission, Patna									
Advt. No.-41/2025, Motor Vehicle Inspector									
Subject-**Mechanical Engineering,** Paper-II Exam Date: 10-08-2025									
Final Answer key, **Set-J**									
Q.No.	**Ans. Key**	**Q.No.**	**Ans. Key**	**Q.No.**	**Ans. Key**	**Q.No.**	**Ans. Key**	**Q.No.**	**Ans. Key**
1	A	21	D	41	A	61	D	81	A
2	D	22	A	42	A	62	C	82	D
3	Deleted	23	A	43	A	63	C	83	A
4	C	24	B	44	A	64	D	84	A
5	B	25	A	45	D	65	A	85	A
6	B	26	B	46	C	66	D	86	C
7	D	27	D	47	B	67	D	87	B
8	C	28	C	48	A	68	D	88	B
9	Deleted	29	A	49	D	69	A	89	C
10	C	30	A	50	D	70	D	90	D
11	D	31	C	51	C	71	C	91	A
12	B	32	D	52	A	72	Deleted	92	D
13	A	33	A	53	C	73	C	93	B
14	A	34	C	54	B	74	C	94	B
15	C	35	A	55	A	75	A	95	B
16	A	36	C	56	A	76	B	96	C
17	A	37	A	57	A	77	A	97	B
18	C	38	A	58	A	78	B	98	C
19	D	39	D	59	B	79	B	99	C
20	B	40	C	60	Deleted	80	B	100	B

Bihar Public Service Commission, Patna

Advt. No.-41/2025, Motor Vehicle Inspector

Subject-**Mechanical Engineering,** Paper-II

Exam Date: 10-08-2025

Final Answer key, **Set-K**

Q.No.	Ans. Key	Q.No.	Ans. Key	Q.No.	Ans. Key	Q.No.	Ans. Key	Q.No.	Ans. Key
1	B	21	Deleted	41	B	61	B	81	A
2	B	22	A	42	C	62	B	82	D
3	B	23	C	43	B	63	D	83	B
4	A	24	C	44	C	64	A	84	D
5	C	25	D	45	D	65	C	85	D
6	C	26	A	46	A	66	B	86	D
7	C	27	Deleted	47	B	67	D	87	B
8	D	28	A	48	B	68	D	88	D
9	B	29	D	49	A	69	A	89	A
10	D	30	C	50	D	70	B	90	Deleted
11	C	31	B	51	B	71	C	91	A
12	C	32	B	52	A	72	C	92	A
13	C	33	A	53	B	73	B	93	B
14	A	34	B	54	A	74	A	94	C
15	C	35	B	55	B	75	B	95	B
16	A	36	A	56	B	76	B	96	C
17	A	37	D	57	D	77	C	97	C
18	C	38	C	58	A	78	Deleted	98	C
19	B	39	D	59	B	79	D	99	B
20	D	40	B	60	B	80	A	100	D

Bihar Public Service Commission, Patna

Advt. No.-41/2025, Motor Vehicle Inspector

Subject-**Mechanical Engineering,** Paper-II

Exam Date: 10-08-2025

Final Answer key, **Set-L**

Q.No.	Ans. Key	Q.No.	Ans. Key	Q.No.	Ans. Key	Q.No.	Ans. Key	Q.No.	Ans. Key
1	A	21	A	41	A	61	D	81	C
2	D	22	D	42	C	62	A	82	D
3	C	23	Deleted	43	A	63	B	83	A
4	C	24	D	44	B	64	C	84	C
5	B	25	D	45	B	65	C	85	D
6	C	26	C	46	B	66	D	86	C
7	A	27	B	47	D	67	C	87	D
8	C	28	C	48	B	68	C	88	C
9	C	29	B	49	D	69	D	89	C
10	B	30	B	50	D	70	A	90	A
11	Deleted	31	B	51	B	71	B	91	D
12	A	32	C	52	C	72	A	92	C
13	D	33	A	53	A	73	C	93	C
14	D	34	C	54	Deleted	74	C	94	C
15	A	35	C	55	D	75	B	95	C
16	C	36	C	56	B	76	C	96	A
17	A	37	D	57	B	77	B	97	D
18	A	38	B	58	A	78	A	98	B
19	A	39	B	59	D	79	D	99	C
20	C	40	C	60	Deleted	80	C	100	A

Jumbled Question Number of Different Sets				
Set-I (Question No.)	**Set-J (Question No.)**	**Set-K (Question No.)**	**Set-L (Question No.)**	**Answer**
06	34	52	85	Ends and loaded at centre
29	57	75	08	$\frac{No.of\ Teeth\ on\ Driver}{No.of\ Teeth\ on\ Driven}$
32	60	78	11	Deleted
44	72	90	23	Deleted
50	78	96	29	1.5mm
74	02	20	53	Annealing
75	03	21	54	Deleted
76	04	22	55	Both rod and coating melt simultaneously.
81	09	27	60	Deleted
83	11	29	62	Pouring basin- Pouring time- Choke area -Sprue
84	12	30	63	Produce Seamless Tubes
96	24	42	75	Upper Deviation

Reason As per Set-I

Q.No.- 06- The provisional answer is option 'B' but the correct answer is option 'A'.
Reason :- Leaf spring is supported at the ends and load at the centre.
Ref. Design of Machine elements by Sharma & Purohit PHI publication.

Q.No.- 29- No Change.
Reason :- Train value = $\frac{No.of\ Teeth\ on\ Driver}{No.of\ Teeth\ on\ Driven}$

Ref:- Theory of Machine and Mechanism by Shingley, Oxford University Press.

Q.No.- 32- Deleted.
Reason :- No option is correct. One speed is desired regardless of changes of load.
Ref:- 1. Governors and Governing Mechanism by H.D.Hall
2. Theory of Machine by S.S. Ratan (TMH).

Q.No.- 44- Deleted
Reason :- Both options (A) and (B) are correct , hence question is deleted.
Ref:- Engineering Thermodynamic by P.K. Nag. TMH Publisher.

Q.No.- 50- No Change.
Reason :- Critical radius of Insulation = $K/_h$ =2mm
Given radius of wire dia. =0.5mm
So , optimal coating thickness= 2- 0.5 =1.5mm.
Heat transfer by P.K. Nag, TMH Publication

Q.No.- 74- No Change.

Reason :- The Annealing Process involves (1) heating the workpiece to within a specific range of temperatures, (2) holding it at that temperature for a period of time (soaking), and (3) cooling it slowly.
Ref:- Manufacturing Process for Engineering Material by Serope Kalpakjian, Steven R Schmid , Pearson Education Publisher.

Q.No.- 75- Deleted.

Reason :- Multiple options are correct. i.e. options B and C are correct. Hence question is deleted.
Ref: Manufacturing Technology by D.K. Singh,
Pearson Education Publisher.

Q.No.- 76- The provisional answer is option 'D' but the correct answer is option 'A'.

Reason :- Both rod and coating melt simultaneously.
Ref:- Manufacturing Process for Engineering Material by Serope Kalpakjian, Steven R Schmid
Pearson Education Publisher.

Q.No.- 81- Deleted.

Reason :- Insufficient data for the given question.
In case of cylindrical riser, relation between height and diameter of cylinder is not given, hence surface area to volume ratio cannot be calculated.
Ref:- Principle of Metal Casting by Richard W Heine, Carl R Loper and Philip C Rosenthal, TMH Publisher.

Q.No.- 83- No Change.

Reason :- In gating system design,
correct sequence is Pouring basin- Pouring time- Choke area -Sprue Ref: Manufacturing Technology by PN Rao Vol-1, Foundry, Forming and welding.
TMH Publisher.

Q.No.- 84- The provisional answer is option 'C' but the correct answer is option 'B'.

Reason :- Ref:- Manufacturing Process and equipment by Jiri Tlusty
PHI Publisher.
Ref:- Principle of Industrial Metal working by Geoffrey W rowe
CBS Publisher.

Q.No.- 96- The provisional answer is option 'C' but the correct answer is option 'B'.

Reason :- Ref:- Engineering Metrology and Measurements
By N.V. Raghavendra, Krishnamurthy, Oxford Univ. press
page No- 57, 58