

**Note:-** This is Module 1 Test series which includes common paper only. Separate test series with video discussion will be conducted for Module 2 Test series (Technical papers 5 & 6) and it will be notify very soon & it will be available in store.

**Starting from 21st  
JULY**

**BPSG-AE 2019 NOTIFICATION TEST SERIES**  
**Branch:- CIVIL | ELECTRICAL | MECHANICAL**

**This test series includes Section:- Hindi+ English + General Studies + General Engineering**

Total Test	General Engg. Partwise	General Engg. Full length	Hindi Full length	English Full length	General Studies
<b>52</b>	<b>30</b>	<b>6</b>	<b>4</b>	<b>4</b>	<b>8</b>

**Note:-** Separate test series will be conducted for Technical papers 5 & 6 and it will be notify later.

### **BPSG AE EXAM PATTERN**

It includes two papers:- (1) Compulsory Paper  
(2) Optional Paper

<b>Compulsory Paper</b>	<b>Total Marks</b>	<b>Exam Time</b>	<b>Nature</b>
General English	100	1hr	Qualifying
General Hindi	100	1hr	Qualifying
General Studies	100	1hr	Marks count for Rank
General Engineering	100	1hr	Marks count for Rank

**Note:-** Above syllabus is common for all branches. Two papers called optional paper belong to technical which are given below.

### **Optional Paper**

<u>Technical Subject Name</u>	<u>Exam Duration</u>	<u>Total Marks</u>
<b>Civil Engg.</b>		
Civil Engineering-1	1 Hour	100 Marks
Civil Engineering-2	1 Hour	100 Marks
<b>Mechanical Engg.</b>		
Mechanical Engineering-1	1 Hour	100 Marks
Mechanical Engineering-2	1 Hour	100 Marks
<b>Electrical Engg.</b>		
Electrical Engineering-1	1 Hour	100 Marks
Electrical Engineering-2	1 Hour	100 Marks

## SYLLABUS OF COMMON PAPERS

### General English

- (1) Active & Passive Voice
- (2) Direct & Indirect Speech
- (3) Synonyms
- (4) Antonyms
- (5) Comprehension Ability
- (6) Sentence Completion
- (7) Idioms & Phrases
- (8) One Word Substitution
- (9) Sentence Improvement
- (10) Spotting Error

### General Hindi

- (1) संधि और संधि विच्छेद
- (2) सामासिक पदों की रचना और समास विग्रह
- (3) उपसर्ग और प्रत्यय
- (4) पर्यायवाची शब्द
- (5) विपरीतार्थक (विलोम) शब्द
- (6) अनेकार्थक शब्द
- (7) शब्द-युग्म
- (8) संज्ञा शब्दों से विशेषण बनाना
- (9) शब्द-शुद्धि : अशुद्ध शब्दों का शुद्धिकरण और शब्दगत अशुद्धि का कारण शुद्धिकरण
- (10) वाक्य-शुद्धि : अशुद्ध वाक्यों का शुद्धिकरण और वाक्यगत अशुद्धि का कारण
- (11) वाच्य : कर्तृवाच्य, कर्मवाच्य और भाक्याच्य प्रयोग
- (12) क्रिया : सकर्मक, अकर्मक और पूर्वकालिक क्रियाएं
- (13) वाक्यांश के लिए एक सार्थक शब्द
- (14) मुहावरे और लोकोक्तियों

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## General Studies

- (1) Geography of India
- (2) History of India
- (3) Indian Polity
- (4) Indian Economy
- (5) Everyday Science
- (6) General Science
- (7) Environmental Science
- (8) General Physics
- (9) General Chemistry
- (10) General Biology
- (11) CURRENT AFFAIRS (from Oct 202 to July 2021)

## GENERAL ENGINEERING

(1) **Engineering Mechanics**:- General equilibrium equation, Equation of motion, work, power and energy.

(2) **Survey**:- Distance and area measurement, measurement of direction and angular slop, Leverage and height, General survey tools, Electrical workshop measurement, Mechanical workshop measurement equipment, linear and angular measurement, straight, flat and round measurement.

(3) **Measurement**:- Measurement of ammeter voltmeter ,charge meter insulation tester energy meter and their working principle.

(4) **Mechanics of solid(SOM)**:- Generalized stress, Strain and constituting laws, transformation of stress, pressure, energy, analysis of beam, column and shaft, unsymmetrical bending, shear center, theories of failure.

(5) **Engineering Materials and its Construction**:- Brick, Lime, Cement, Aggregates, Glass, Cast Iron and Steel, Iron-Free Metals, Timber, Paints, Miscellaneous Engineering Materials, Engineering Material Testing, Brick Flooring and Wall Building.

(6) **Engineering Economics and Management Engineering**:- Principles of Engineering Economy, project planning, CPM and PERT techniques, construction Equipment and safety, analysis of rate of important construction items.

(7) **Transport phenomenon**: Laminar and turbulent flow, concept of boundary layer, continuity equation, Bernoulli's theorem, energy equation, flow measurement, dimensional analysis and modelling, one dimensional study, Conduction of heat through single and multilayer bodies including wells and cylinder, natural and forced convective heat transfer, concept of thermal boundary, Stefan Boltzmann law of radiation, Kirchhoff's law, concept of black and brown bodies.

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(8) **Energy Conversion:** Thermodynamic process, First and second law of thermodynamics, carnot cycle, Rankine cycle, otto cycle, Diesel cycle, impulse and reaction turbine, Reciprocating and centrifugal pump.

(9) **Basic Electrical Engineering & Electrical Machine:-**circuit laws, network theorems, periodic signals, series & parallel connections of elements in ac & dc, transistor junctions, diodes, transistor equivalent circuit ,transistor common emitter circuit, magnetic effect of electric currents, magnetic circuits, Transformers & its circuit, electromagnetic energy conversion, DC machine (motor & generator), AC machine(motor & generator).

(10) **Environmental engineering:-** Water pollution and purification, waste water treatment, air pollution and its control, ecological balance.

### TEST SERIES SCHEDULE

Note:- Schedule may change as per BPSG Notification

TEST NO.	DATE	SUBJECT	SYLLABUS
1	21 <sup>st</sup> July	Basic Electrical Engg. -Part 1	Circuit laws, network theorems, periodic signals, series & parallel connections of elements in ac & dc
2	23 <sup>rd</sup> July	Basic Electrical Engg.-Part 2	circuit laws, network theorems, periodic signals, series & parallel connections of elements in ac & dc
3	25 <sup>th</sup> July	BASIC ELECTRICAL ENGG-PART 3	Transistor junctions, diodes, transistor equivalent circuit ,transistor common emitter circuit
4	27 <sup>th</sup> July	BASIC ELECTRICAL ENGG-PART 4	Magnetic effect of electric currents, magnetic circuits
5	29 <sup>th</sup> July	BASIC ELECTRICAL ENGG-PART 5	Transformers & its circuit, electromagnetic energy conversion
6	30 <sup>th</sup> July	BASIC ELECTRICAL ENGG-PART 6	DC machine (motor & generator), AC machine (motor & generator).
7	1 <sup>st</sup> Aug	SOM Part-1	Generalized stress, Strain and Constituting laws, transformation of stress, pressure, energy
8	1 <sup>st</sup> Aug	Gen Studies Full length-1	Full Syllabus
9	3 <sup>rd</sup> Aug	SOM Part-2	Analysis of beam, column and shaft.
10	3 <sup>rd</sup> Aug	Gen Studies Full length-2	Full Syllabus
11	5 <sup>th</sup> Aug	SOM Part-3	Unsymmetrical bending, shear center, Theories of failure
12	5 <sup>th</sup> Aug	Gen Studies Full length-3	Full Syllabus
13	7 <sup>th</sup> Aug	Transport phenomenon part 1	laminar and turbulent flow, Concept of boundary layer, Continuity equation, Bernoulli's theorem, energy

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			equation, flow measurement, dimensional analysis and modelling
14	7 <sup>th</sup> Aug	Gen Studies Full length-4	Full Syllabus
15	9 <sup>th</sup> Aug	Transport phenomenon part 2	laminar and turbulent flow, Concept of boundary layer, Continuity equation, Bernoulli's theorem, energy equation, flow measurement, dimensional analysis and modelling
16	11 <sup>th</sup> Aug	Transport phenomenon part 3	One dimensional study, conduction of heat through single and multilayer bodies including wells and cylinder
17	13 <sup>th</sup> Aug	Transport phenomenon part 4	One dimensional study, conduction of heat through single and multilayer bodies including wells and cylinder
18	16 <sup>th</sup> Aug	Transport phenomenon part 5	Natural and forced convective heat transfer, concept of thermal boundary, Stefan Boltzmann law of radiation, kirchhoff's law, concept of black and brown bodies
19	18 <sup>th</sup> Aug	Transport phenomenon part 6	Natural and forced convective heat transfer, concept of thermal boundary, Stefan Boltzmann law of radiation, kirchhoff's law, concept of black and brown bodies
20	20 <sup>th</sup> Aug	Measurement part 1	Measurement of ammeter voltmeter
21	23 <sup>rd</sup> Aug	Measurement part 2	charge meter insulation tester ,energy meter and their working principle.
22	24 <sup>th</sup> Aug	Energy conversion part 1	Thermodynamic process, first and second law of thermodynamics, carnot cycle
23	26 <sup>th</sup> Aug	Energy conversion part 2	Rankine cycle, otto cycle, Diesel cycle
24	28 <sup>th</sup> Aug	Energy conversion part 3	Impulse and Reaction Turbine, Pelton wheel turbine, Francis turbine, Reciprocating and centrifugal pump.
25	30 <sup>th</sup> Aug	Engg. Mechanics part 1	General equilibrium equation, Equation of motion, work
26	31 <sup>st</sup> Aug	Engg. Mechanics part 1	power and energy
27	1 <sup>st</sup> Sep	Engineering Materials and its Construction Part 1	Brick, Lime, Cement, Aggregates, Glass, Cast Iron and Steel, Iron-Free Metals
28	2 <sup>nd</sup> Sep	Engineering Materials and its Construction	Timber, Paints, Miscellaneous Engineering Materials, Engineering Material Testing, Brick Flooring and Wall Building

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		Part 2	
29	3 <sup>rd</sup> Sep	Engineering Economics and Management Engineering	Principles of Engineering Economy, project planning CPM and PERT techniques, construction Equipment safety, analysis of rate of important construction ite
30	4 <sup>th</sup> Sep	Surveying Part 1	Distance and area measurement, measurement of direction and angular slop, Leverage and height, General survey tools, Electrical workshop measurement,
31	5 <sup>th</sup> Sep	Surveying Part 1	Mechanical workshop measurement equipment, lir and angular measurement, straight, flat and roun measurement.
32	6 <sup>th</sup> Sep	Environment Part 1	Water pollution and purification,
33	7 <sup>th</sup> Sep	Environment Part 2	waste water treatment
34	8 <sup>th</sup> Aug	Environment Part 3	Air pollution and its control, ecological balance.
35	10 <sup>th</sup> Sep	Gen. Hindi	Full Syllabus
36	10 <sup>th</sup> Sep	Gen. English	Full Syllabus
37	10 <sup>th</sup> Sep	Gen Studies	Full Syllabus
38	10 <sup>th</sup> Sep	Gen Engg. 1	Full syllabus
39	12 <sup>th</sup> Sep	Gen. Hindi	Full Syllabus
40	12 <sup>th</sup> Sep	Gen. English	Full Syllabus
41	12 <sup>th</sup> Sep	Gen Studies	Full Syllabus
42	12 <sup>th</sup> Sep	Gen Engg. 2	Full syllabus
43	14 <sup>th</sup> Sep	Gen. Hindi	Full Syllabus
44	14 <sup>th</sup> Sep	Gen. English	Full Syllabus
45	14 <sup>th</sup> Sep	Gen Studies	Full Syllabus
46	14 <sup>th</sup> Sep	Gen Engg. 3	Full syllabus
47	16 <sup>th</sup> Sep	Gen. Hindi	Full Syllabus
48	16 <sup>th</sup> Sep	Gen. English	Full Syllabus
49	16 <sup>th</sup> Sep	Gen Studies	Full Syllabus
50	16 <sup>th</sup> Sep	Gen Engg. 4	Full syllabus
51	17 <sup>th</sup> Sep	Gen. Engg 5	Full Syllabus
52	17 <sup>th</sup> Sep	Gen. Engg 6	Full Syllabus

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