

(TO BE UPLOADED ON THE WEBSITE OF THE COMMISSION DATED 18.07.2017)

“GOVERNMENT STRIVES TO HAVE A WORKFORCE WHICH REFLECTS GENDER BALANCE AND WOMEN CANDIDATES ARE ENCOURAGED TO APPLY”

STAFF SELECTION COMMISSION

NOTICE

RECRUITMENT OF SCIENTIFIC ASSISTANT IN INDIA METEOROLOGICAL DEPARTMENT EXAMINATION, 2017.

Date of Computer Based Exam: 20.11.2017 to 27.11.2017
Closing Date: 04.08.2017

F.No.3-1/2017-P&P-I Staff Selection Commission will conduct a open competitive examination for recruitment to the post of Scientific Assistant in India Meteorological Department, Group ‘B’ Non-Gazetted, Non-Ministerial post, in the Level 6 of the Pay Matrix (Pay Band2(Rs.9300-34800) plus Grade Pay Rs.4200 in pre-revised scale),from 20.11.2017 to 27.11.2017 in computer based mode all over the country.

2. TENTATIVE VACANCIES / RESERVATION:

- (i) Total Vacancies:1102.
- (ii) The number of vacancies is tentative and subject to variation.
- (iii) Reservation for SC/ST/OBC/PH etc. categories is available as per extant Govt. Orders.
- (iv) The posts have been identified suitable for the persons suffering from disabilities of One Arm affected (OA) or One Leg affected (OL).
- (v) The posts carry All India Service Liability (AISL) i.e. the candidate, on selection, may be asked to serve anywhere in the country.

3. NATIONALITY / CITIZENSHIP:

A candidate must be either:

- (a) a citizen of India, or
- (b) a subject of Nepal, or
- (c) a subject of Bhutan, or
- (d) a Tibetan refugee who came over to India, before the 1st January, 1962 with the intention of permanently settling in India, or
- (e) a person of Indian origin who has migrated from Pakistan, Burma, Sri Lanka, East African Countries of Kenya, Uganda, the United Republic of Tanzania (Formerly Tanganyika and Zanzibar), Zambia, Malawi, Zaire, Ethiopia and Vietnam with the intention of permanently settling in India.

Provided that a candidate belonging to categories (b), (c), (d) and (e) above shall be a person in whose favour a certificate of eligibility has been issued by the Government of India.

A candidate in whose case a certificate of eligibility is necessary may be admitted to the Examination but the offer of appointment will be given only after the necessary eligibility certificate has been issued to him by the Government of India.

4(A). **AGE LIMIT: Not exceeding 30 years as on 04.08.2017**

Note: Candidate should note that only the Date of Birth as recorded in the Matriculation / Secondary Examination Certificate will be accepted by the Commission for determining the Age eligibility and no subsequent request for its change will be considered or granted.

4.(B) Permissible relaxation of Upper age limit prescribed under para 4(A) above :

Category-Codes for claiming Age Relaxation as on the date of reckoning:

Code No.	Category	Age Relaxation permissible beyond the Upper age limit.
01	SC/ST	5 years
02	OBC	3 years
03	PH	10 years
04	PH + OBC	13 years
05	PH + SC/ST	15 years
06	Ex-Servicemen(Unreserved/General)	3 years after deduction of the military service rendered from the actual age as on the Closing date for receipt of application
07	Ex-Servicemen (OBC)	6 years(3 years + 3 years) after deduction of the military service rendered from the actual age as on the Closing date for receipt of application
08	Ex-Servicemen (SC & ST)	8years(3 years + 5 years) after deduction of the military service rendered from the actual age as on the Closing date for receipt of application
12	Central Govt. Civilian Employees(General/Unreserved) who have rendered not less than 3 years regular and continuous service as on closing date for receipt of application	5 years
13	Central Govt. Civilian Employees(OBC)) who have rendered not less than 3 years regular and continuous service as on closing date for receipt of application	8 (5 +3) years
14	Central Govt. Civilian Employees(SC/ST) who have rendered not less than 3 years regular and continuous service as on closing date for receipt of application	10(5+5) years
21	Candidates who had ordinarily been domiciled in the State of Jammu & Kashmir during the period from 1 st January 1980 to 31 st December 1989(Unreserved/General)	5 years
22	Candidates who had ordinarily been domiciled in the State of Jammu & Kashmir	8 years

	during the period from 1 st January 1980 to 31 st December 1989 (OBC)	
23	Candidates who had ordinarily been domiciled in the State of Jammu & Kashmir during the period from 1 st January 1980 to 31 st December 1989 (SC/ST)	10 years
24.	Defence Personnel disabled in operation during hostilities with any foreign country or in a disturbed area and released as a consequence thereof. (Unreserved/General)	5 years
25.	Defence Personnel disabled in operation during hostilities with any foreign country or in a disturbed area and released as a consequence thereof.(OBC)	8(5+3) years
26.	Defence Personnel disabled in operation during hostilities with any foreign country or in a disturbed area and released as a consequence thereof(SC/ST)	10(5+5)years

NOTE I: The period of "Call up Service" of an Ex-Serviceman in the Armed Forces shall also be treated as service rendered in the Armed Forces for purpose of age relaxation, as per rules.

NOTE II: The post of Scientific Assistant being a Group 'B' post, there is **no reservation** for Ex-Servicemen category. However, benefit of age-relaxation will be admissible to Ex- Serviceman candidates, as per extant Govt. Orders.

NOTE III: Age concession is not admissible to sons, daughters and dependants of Ex-Servicemen.

Explanation: An 'ex-serviceman' means a person –

- (i) who has served in any rank whether as a combatant or noncombatant in the Regular Army, Navy and Air Force of the Indian Union, and
 - (a) who either has been retired or relieved or discharged from such service whether at his own request or being relieved by the employer after earning his or her pension; or
 - (b) who has been relieved from such service on medical grounds attributable to military service or circumstances beyond his control and awarded medical or other disability pension; or
 - (c) who has been released from such service as a result of reduction in establishment; or
- (ii) who has been released from such service after completing the specific period of engagement, otherwise than at his own request, or by way of dismissal, or discharge on account of misconduct or inefficiency and has been given a gratuity; and includes personnel of the Territorial Army, namely, pension holders for continuous embodied service or broken spells of qualifying service; or

- (iii) personnel of the Army Postal Service who are part of Regular Army and retired from the Army Postal Service without reversion to their parent service with pension, or are released from the Army Postal service on medical grounds attributable to or aggravated by military service or circumstance beyond their control and awarded medical or other disability pension; or
- (iv) personnel, who were on deputation in Army Postal Service for more than six months prior to the 14th April, 1987; or
- (v) gallantry award winners of the Armed forces including personnel of Territorial Army; or
- (vi) ex-recruits boarded out or relieved on medical ground and granted medical disability pension.

4(C) :Candidates who wish to be considered against vacancies reserved/or seek age-relaxation must submit requisite certificate from the competent authority, in the prescribed format when such certificates are sought at the time of Document Verification. Otherwise, their claim for SC/ST/OBC/PH/Ex-Serviceman status will not be entertained and their candidature/applications will be considered under **General (UR)** category. The formats of the certificates are available on our website. Certificates obtained in any other format will not be accepted.

A person seeking appointment on the basis of reservation to OBCs must ensure that he/she possesses the caste/ community certificate and does not fall in creamy layer on the crucial date. The crucial date for this purpose will be the closing date for receipt of applications i.e. on 04.08.2017. Candidates may also note that in respect of the above, their candidature will remain provisional till the veracity of the concerned document is verified by the Appointing Authority. Candidates are warned that they may be debarred from the examination conducted by the Commission in case they fraudulently claim SC/ST/OBC/Ex-Serviceman/PH (PWD) status. No attendant will be allowed with candidates inside the examination hall.

5. **MINIMUM ESSENTIAL EDUCATIONAL QUALIFICATIONS:**
(As on 04.08.2017)

Bachelor's Degree in Science (with Physics as one of the subject)/ Computer Science/Information Technology/ Computer Applications OR Diploma in Electronics and Telecommunication Engineering from a recognized Institution/University or equivalent.

NOTE-I The qualifying Degree or diploma referred above should be in First Class (60% marks) or 6.75 CGPA on a 10 point scale.

NOTE-II The qualifying Degree or Diploma referred above must be of three (3) years duration after (10+2) examination.

NOTE-III The applicant must have passed 10+2 Examination from a Recognized Board or equivalent in Science with Physics and Mathematics as core subjects.

NOTE-IV: As per Ministry of Human Resource Development Notification dated 10.06.2015 published in Gazette of India, all the degrees/ diplomas/ certificates including technical education degrees/ diplomas awarded through Open and Distance Learning mode of education by the Universities established by an Act of Parliament or State Legislature, Institutions Deemed to be Universities under

Section 3 of the University Grants Commission Act,1956 and Institutions of National Importance declared under an Act of Parliament stand automatically recognized for the purpose of employment to posts and services under the Central Government provided they have been approved by the Distance Education Bureau, University Grants Commission.

NOTE-V: Candidates who have not acquired/will not acquire the educational qualification as on the closing date of receipt of application will not be eligible and need not apply.

NOTE-VI: Ex-Serviceman who have done various courses from Armed Forces which are certified by competent Authority that they are equivalent to **Bachelor's Degree in Science (with Physics as one of the subject)/ Computer Science/ Information Technology/ Computer Applications OR Diploma in Electronics and Telecommunication Engineering** are eligible to appear in the Examination.

6. **MODE OF PAYMENT:** FEE PAYABLE Rs. 100/- (Rupees One Hundred only)

Candidate may note that only online applications will be accepted at www.ssconline.nic.in.

All women candidates and candidates belonging to Scheduled Caste, Scheduled Tribe and Physically Handicapped categories are exempted from paying application fee, as per extant government orders.

Fees can be paid through SBI challan/ SBI Net banking or through credit/debit cards of any bank.

Fee once paid will not be refunded under any circumstance.

7. **CENTRES OF EXAMINATION:**

Details of Examination Centres and Regional/ Sub-Regional Offices: The examination may be held at the following centres. Correspondence relating to non-receipt of Admission Certificate etc. and other grievances should be sent to concerned Regional Offices, details of which are as under:

S.No	Examination Centres & Centre Code	Address of Regional Offices
1.	Agra(3001), Allahabad(3003), Kanpur(3009), Lucknow (3010), Varanasi (3013), Bhagalpur (3201), Patna(3206)	Regional Director(CR), Staff Selection Commission, 21-23, Lowther Road, Allahabad, Uttar Pradesh-211 002.
2.	Gangtok (4001), Ranchi(4205), Jalpaiguri (4408), Kolkata(4410), Bhubaneshwar (4604), Sambalpur (4609), Port Blair (4802)	Regional Director (ER), Staff Selection Commission, 1 st MSO Building,(8 th Floor), 234/4, Acharya Jagadish Chandra Bose Road, Kolkata, West Bengal-700020

3.	Bangalore(9001), Dharwar (9004), Gulbarga (9005), Mangalore(9008), Kochi (9204), Kozhikode(Calicut)(9206), Thiruvananthapuram (9211), Thrissur (9212)	Regional Director(KKR), Staff Selection Commission, 1 st Floor, "E" Wing, Kendriya Sadan, Koramangala, Bangalore, Karnataka-560034
4.	Almora(2001), Dehradun(2002), Haldwani (2003), Srinagar (Uttarakhand) (2004), Delhi(2201), Ajmer(2401), Alwar(2402), Bikaner(2404), Jaipur(2405), Jodhpur(2406), Kota(2407), Sriganganagar(2408), Udaipur(2409)	Regional Director (NR), Staff Selection Commission, Block No. 12, CGO Complex, Lodhi Road, New Delhi-110504
5.	Itanagar(5001), Dibrugarh(5102), Guwahati (Dispur)(5105), Jorhat (5107),Silchar(5111), Kohima (5302), Shillong(5401),Imphal(5501), Churachandpur(5502), Agartala(5601), Aizwal(5701)	Regional Director(NER), Staff Selection Commission, HOUSEFED Complex, West End Block, Last Gate, Beltola Basistha Road, Dispur, Guwahati, Assam-781 006.
6.	Guntur(8001), Vishakhapatnam(8007), Chennai(8201), Madurai(8204), Hyderabad(8601), Warangal (8603)	Regional Director (SR), Staff Selection Commission, EVK Sampath Building, 2 nd Floor, College Road, Chennai, Tamil Nadu-600006
7.	Ahmedabad(7001), Vadodara (7002), Rajkot(7006), Surat(7007), Amravati (7201), Aurangabad(7202), Kolhapur(7203), Mumbai(7204), Nagpur(7205), Nashik(7207), Pune(7208), Panaji(7801)	Regional Director (WR), Staff Selection Commission, 1 st Floor, South Wing, PratishtaBhawan, 101 M.K. Road, Mumbai, Maharashtra-400020
8.	Bhopal(6001),Chindwara(6003), Guna(6004), Gwalior (6005), Indore(6006), Jabalpur (6007), Khandwa (6009),Ratlam (6011),Satna(6014),Sagar(6015), Ambikapur(6201), Bilaspur(6202),Jagdalpur(6203), Raipur(6204)	Dy. Director (MPR), Staff Selection Commission, J-5, Anupam Nagar, Raipur, Chhatisgarh-492001
9.	Jammu(1004), Leh(1005), Srinagar(J&K)(1007), Hamirpur (1202), Shimla(1203), Bhathinda (1401), Jalandhar(1402), Chandigarh (1601)	Dy. Director (NWR), Staff Selection Commission, Block No. 3, Gr. Floor, Kendriya Sadan, Sector-9, Chandigarh-160017

NOTE I: No change of Centre of Examination will be allowed under any circumstances. Hence, the candidates should select the centres carefully and indicate the same correctly in their applications.

NOTE II: The Commission reserves the right to cancel any Centre and/or add some other centre. Commission also reserves the right to divert candidates of any centre to some other Centre to take the examination.

8 SCHEME OF EXAMINATION:

The examination would comprise 200 questions carrying 200 marks for two hours duration. The question paper would have two parts, Part - I & Part - II.

<u>Papers</u>	Subject	No. of questions	Duration & Timings
<u>Part-I</u> Computer based Examination mode	(i) General Intelligence & Reasoning	25	120 Minutes (Total)
	(ii) Quantitative Aptitude	25	
	(iii) English language & Comprehension	25	
	(iv) General Awareness	25	
<u>Part-II</u> Computer based Examination mode	Physics, Computer Science and Information Technology, Electronics & Telecommunication Engineering.	100	

Note: Candidates are **not** permitted to bring or use **Mobile Phone, Calculators or any other electronic/ electrical device for answering any paper**. Candidates must not, therefore, bring **Mobile Phone, Calculators or any other electronic/electrical device** inside the Examination premises. Possession of these items, whether in use or not, will be considered as “use of unfair means” in the Examination and appropriate action will be taken by the Commission against such candidates, as per extant policy of the Commission.

Note-4: There will be negative marking of 0.25 marks for each wrong answer in Part-I& II. Candidates are, therefore, advised to keep this in mind while answering the questions.

Note-5: Discrepancies in question paper should be brought to the notice of the Commission through online challenge system when representations are invited by the commission after the examination. Representations submitted thereafter and through any other means will not be entertained.

9. SYLLABUS

The details of the syllabus are given below.

Part-I

(i) **General Intelligence & Reasoning:** The Syllabus for General Intelligence would include questions of both verbal and non-verbal type. The test may include questions on analogies, similarities, differences, space visualization, problem solving, analysis, judgement, decision making, visual memory, discrimination, observation, relationship concepts, arithmetical reasoning, verbal and figure classification, arithmetical number series etc. The test will also

include questions designed to test the candidate's abilities to deal with abstract ideas and symbols and their relationships, arithmetical computations and other analytical functions.

(ii) Quantitative Aptitude: The questions will be designed to test the ability of appropriate use of numbers and number sense of the candidate. The scope of the test will be computation of whole numbers, decimals, fractions and relationships between numbers, Percentage, Ratio & Proportion, Square roots, Averages, interest, Profit and Loss, Discount, Partnership Business, Mixture and Alligation, Time and Distance, Time & Work, Basic algebraic identities of School Algebra & Elementary Surds, Graphs of Linear Equations, Triangle and its various Kinds of centers, Congruence and similarity of triangles, Circle and its chords, tangents, angles subtended by chords of a circle, common tangents to two or more circles, Triangle, Quadrilaterals, Regular Polygons, Circle, Right Prism, Right Circular Cone, Right Circular Cylinder, Sphere, Hemispheres, Rectangular Parallelepiped, Regular Right Pyramid with triangular or square base, Trigonometric ratio, Degree and Radian Measures, Standard Identities, Complementary angle, Heights and Distances, Histogram, Frequency polygon, Bar diagram & Pie chart.

(iii) English Language & Comprehension: English grammar, Vocabulary, Spellings, Synonyms and Antonyms, Comprehension, Correct and incorrect usages, etc.

(iv) General Awareness: General, physical, geographical, topographical, economic and climatic features of India. Current events. Matters of everyday observation and experience on scientific aspects and reasoning. Basic topics of mathematics, Chemistry and Physics. History of India, its cultural heritage, freedom movement, salient feature of the Constitution of India. Economic and social aspect of the country and its people.

Part-II

a) Physics

Mechanics: Units and dimensions, SI Units, Newton's Laws of Motion, conservation of linear and angular momentum, projectiles, rotational motion, moment of inertia, rolling motion, Newton's Law of gravitation, Planetary motion, Kepler's Laws of Planetary motion, artificial satellites, Fluid motion, Bernoulli's theorem, Surface tension, Viscosity, Elastic Constants, bending of beams, torsion of cylindrical bodies, elementary ideas of special theory of relativity.

Thermal Physics, Radiation & Sound: Thermometry, Zeroth, first and second laws of thermodynamics, reversible and irreversible processes, Internal energy, Heat engines, Maxwell's relation, ideal and real gases, equations of state, Heat Capacities, Adiabatic and Isothermal processes, Clausius-Clapeyron relation, Thermal Conductivity, Entropy, Enthalpy, Dalton's law of partial pressure, Vapour pressure, Kinetic theory of gases, Brownian motion, Maxwell's velocity distribution, Equipartition of energy, mean free path Vander walls' equation of State, Liquefaction of gases. Blackbody radiation, Kirchhoff's law, Stephen's law, Planck's law. Conduction in solids.

Wave and Oscillations: Simple harmonic motion, wave motion, superposition principle, Damped oscillations; forced oscillations and resonance; simple oscillatory systems; vibrations of rods, strings and air columns. Doppler effect; Ultrasonic; Sabine's law of reverberation; Recording and reproduction of sound.

Optics: Nature and propagation of light; Reflection & Refraction. Interference; diffraction; polarization of light; simple interferometers. Determination of wavelength of spectral lines, Electromagnetic spectrum. Rayleigh scattering, Raman effect, Lenses and mirrors, combination of coaxial thin lenses, spherical and chromatic aberrations, and their corrections, Microscope, Telescope, Eyepieces and Photometry.

Electricity and magnetism: Electric charges, fields and potentials, Gauss's theorem, Electrometers, Dielectrics, Magnetic properties of matter and their measurement, Elementary theory of dia, para and ferro-magnetism, Hysteresis, Electric current and their properties, Ohm's law, Galvanometers, Whetstone's bridge and applications, Potentiometers, Faraday's law of E.M. induction, self and mutual inductance and their applications, alternating currents, impedance and resonance, LCR circuit, Dynamos, motors, transformers, Peltier-Seebeck and Thomson effects and applications, electrolysis, Hall effect, Hertz experiment and electro-magnetic waves, Particle accelerators and cyclotron.

Atomic structure: Electron, measurement of 'e' and 'e/m', measurement of Planck Constant, Rutherford-Bohr Atom, X-rays, Bragg's law, Moseley's law, Radioactivity, Alpha-Beta-Gamma emission, Elementary ideas of nuclear structures, Fission, Fusion and Reactors, Louis de Broglie waves and Electron Microscope.

Electronics; Thermo-ionic emission, diodes and triodes, p-n diodes and transistors, simple rectifier, amplifier and oscillator circuits.

b) Computer Science and Information Technology

Computer: History of Computer and their classification, Basic Organization, Memory – RAM, ROM, EPROM, etc, Magnetic-Floppy, Hard disks, CDROM, WORM etc, Concept of Virtual Memory and Cache Memory, Number systems, binary octal, Hexadecimal, Binary Addition, Subtraction and Multiplication, Flotation, point representation and arithmetic, Arithmetic through stacks.

Operating systems: assemblers, elements of Assembly language programming- Overview of the Assembly process, assembler for the IBM PC, Process synchronization, Memory Management – address Binding – dynamic Loading and linking – overlays – logical and Physical address space – Contiguous Allocation - internal & External Fragmentation. Non-Contiguous Allocation: Paging and Segmentation Schemes – Implementation – Hardware Protection – Protection – sharing – Fragmentation.

Virtual Memory: Demand Paging – Page Replacement – Page Replacement algorithms – Thrashing.

File System: File Concepts – Access Methods – Directory Structures – Protection Consistency Semantics – File system Structures – Allocation Methods – Free Space Management.

I/O System: Overview – I/O hardware – Application I/O Interface – Kernel I/O subsystem, Performance, Secondary Storage Structures, Protection, Goals, Domain – Access matrix.

Assemblers: Elements of assembly language programming – Overview of the Assembly process – Design of a low-pass Assembler – a single pass Assembler for the IBM PC. The security Problem – Authentication – Threats – Threat Monitoring – Encryption.

Fundamentals of programming: Unix Programming, Programming in FORTRAN, C, Object Oriented Programming in C++, programming in Java, Basics of compilers.

Database Management Systems: Advantages and components of a Database Management Systems, Data Types, Data Dictionary, Query Basics, Forms and Reports, Graphical objects, Error Handling, Distributing Application, Data Storage Methods, Data Clustering and Partitioning, Database Administration, Backup and Recovery, Security and Privacy, Distributed Databases, Client/Server Databases, Object Oriented Databases, Integrated Applications, SQL, RDBMS.

Internet Technology: Basics, topologies, layers, switching in the networks, bridges, routers and gateways, types of networks, WWW. Client/Server Applications, Internet Standards and specifications, ISP, Broad Band Technologies, Protocols, web-servers, browsers, and security, fire walls, date security, HTML, dHTML, XML, Web designing.

Fundamentals of Geographical Information System (GIS): GIS Data and Spatial Models, Topology and Spatial Operations, Projections, Scale and Coordinate Systems, Mapping, GIS Analysis, Cartography. Basics of GIS application development.

c) **Electronics & Telecommunication**

i) **Electronics:**

Conductors, Semi-conductors, Insulators, Magnetic, Passive components, characteristics of Resistors, Capacitors and inductors. PN Junction diode, forward and reverse bias characteristics and equivalent circuits of diode, Zener diode and applications, clipping, clamping and rectifier circuits using diodes.

Bipolar Junction Transistors (BJT) Field Effect Transistor (FET) and MOSFET; Biasing and stability, Emitter follower and its applications – Negative feedback Transistor as a switch, Multistage Amplifiers, Feedback, Oscillators, Multivibrators, Voltage regulation, Power amplifiers.

Introduction to Network Theorems: Kirchoff's laws, superposition, Thevenin's Norton's and Maximum power theorems.

Voltage and Current relationship in the resistance, inductance and capacitance. Concept of reactance, susceptance, conductance, impedance and admittance in series and parallel RL, RC and RLC circuits – Three phase supply-star and delta connection diagrams – Relation between line and phase voltages and currents, series and parallel resonance circuits – condition of resonance, resonant frequency, Q factor and bandwidth.

Digital electronics: – Logic gates, Demorgan's theorem, Boolean algebra, frequency counters, flip-flops, shift registers, Basic concepts of Digital to Analog and Analog to Digital Converters, Timing circuits, Digital logic circuits, systems & codes Combinational logic design.

ii) **Telecommunication:**

Basic antenna principle directive gain, directivity, radiation pattern, broad-side and end-fire array, Yagi antenna, Parabolic antenna, Ground wave propagation, space waves, ionosphere propagation and electromagnetic frequency spectrum, Modulation, types of modulation, Amplitude Modulation (AM), Modulation index, Power relation in AM, Generation and Demodulation of AM.

Single Side Band (SSB): Power requirement in comparison with AM, Advantages of SSB over AM. Concept of Balanced Modulator, Generation of SSB, Pilot Carrier System. Independent Side System, Vestigial Sideband Transmission.

Frequency Modulation (FM): Definition of FM, Bandwidth, Noise triangle, Pre-emphasis and De-emphasis.

Pulse Modulation (PM): Definition of PM. Difference between AM and FM. Radio receivers. Sampling Theorem, PAM, PTM, PWM, PPM, pulse code modulation, Quantization noise, commanding, PCM system, differential PCM, Delta modulation.

Multiplexing: FDM/TDM.

Introduction of digital Communication: PSK, ASK, FSK, introduction to fiber optics system, Propagation of light in optical fiber and ray model.

Propagation of signals at HF, VHF, UHF and microwave frequency and satellite communications.

10. **General instructions to be complied by the candidates in the Computer based Examination:**

In the question papers, wherever necessary, the Metric systems of weights and measures only will be used.

Use of mobile phone, calculator, Blue tooth devices and other electronic gadgets and their accessories is not permitted. Therefore, these should not be brought inside the Examination Premises/ Venue.

Candidature of any candidate found to possess mobile phones or any other means of wireless communication or related accessories either in working or switched off mode, shall be cancelled forthwith. This will also invite further penal action as per the policy of the Commission.

Candidates are advised to desist from use of any unfair method in the examination lab which will render them ineligible for further consideration for the examination and also lead to their debarment from Commission's examinations in future beside inviting criminal prosecution.

11. **MODE OF SELECTION :**

- I. The Commission will prepare the category-wise Merit List and hand it over to India Meteorological Department, which would declare the final result.

- II. SC, ST, OBC and PH candidates, who are selected on their own merit without relaxed standards, along with candidates belonging to other communities, will not be adjusted against the reserved share of vacancies. Such SC, ST, OBC and PH candidates will be accommodated against the general/unreserved vacancies in the post as per their position in the overall Merit List or vacancies earmarked for their category, whichever is advantageous to them. The reserved vacancies will be filled up separately from amongst the eligible SCs, STs, OBCs and PH candidates.
- III. A person with physical disability (OH) who qualifies the Commission's examination under General standards can be appointed against an unreserved vacancy provided the post is identified suitable for person with disability of relevant category.
- IV. Reserved category candidate who qualifies on the basis of relaxed standards viz. age limit, experience or qualifications, permitted number of chances in written examination, extended zone of consideration, etc. will be counted against reserved vacancies and not against general vacancies subject to fitness of such candidate for selection. Such candidates may also be recommended at the relaxed standards to fill up the number of vacancies reserved for them, irrespective of their rank in the order of merit. In so far as cases of Ex-Servicemen are concerned, deduction from the age of Ex-Servicemen is permissible and such exemption will not be termed as relaxed standards in regard to age.
- V. Success in the examination confers no right of appointment unless Government is satisfied after such enquiry as may be considered necessary that the candidate is suitable in all respects for appointment to the service/post.
- VI. Candidates applying for the examination should ensure that they fulfill all the eligibility conditions for admission to the examination. Their admission at all stages of the examination will be purely provisional, subject to their satisfying the prescribed eligibility conditions. If, on verification, at any time before or after the written examination, it is found that they do not fulfill any of the eligibility conditions, their candidature for the examination will be cancelled by the Commission.

12. **RESOLUTION OF TIE CASES**

In cases where more than one candidate secures the equal aggregate marks, tie will be resolved by applying the following methods one after another:-

- (i) Total marks in the Computer based examination (Part-I & Part-II)
- (ii) Marks in Part-II
- (iii) Marks in Part-I
- (iv) Date of birth, with older candidates placed higher.
- (v) Alphabetical order in which first names of the candidates appear on line.

13. **HOW TO APPLY:** The application must be submitted through online mode only. For detailed instructions for filling up the application form, Annexure-I may be referred to.

14. ADMISSION TO THE EXAMINATION:

Admission Certificates (ACs) for the Examination indicating the time table and venues address of examination for each candidate will be uploaded on the website of the concerned Regional office of the Commission about two weeks before the date of examination. If any candidate is unable to download Admission Certificate for the examination one week before the date of examination, he/she must immediately contact the concerned Regional/Sub Regional Office (s) of the commission with proof of having submitted his/her application. Failure to do so will deprive him/her of any claim for consideration.

15. COMMISSION'S DECISION FINAL

The decision of the Commission in all matters relating to eligibility, acceptance or rejection of the applications, penalty for false information, mode of selection, conduct of examination(s) and allotment of examination centres will be final and binding on the candidates and no enquiry/correspondence will be entertained in this regard.

16. COURT'S JURISDICTION

Any dispute with regard to this recruitment will be subject to courts/tribunals having jurisdiction over the place of concerned Regional/Sub-Regional Office of the SSC from where the candidate has appeared in the examination.

17. In accordance with the directions issued by DOPT vide its O.M. No.39020/1/2016-Estt. (B) dated 21.06.2016 for increasing access of the unemployed candidates to job opportunities it has been decided that after declaration of final result the Commission will make the scores and rankings in the said open Competitive Examinations conducted by the Commission available on its website in descending order of ranking. Accordingly, it has been decided that the following details of the candidates will be made available on its website: (i) Name of candidate. (ii) Father/Husband's name (iii) Date of Birth (iv) Category(Gen/ SC/ ST/ OBC/ PH/ Minority) (v) Gender of the candidate (vi) Educational Qualifications (vii) Total Marks obtained in the qualifying examination (viii) Ranking by which the merit is decided (ix) Complete address (x) E-mail address. However, the candidate will have the option, at the time of filling up of his/her application form, from opting out of disclosing the above details publicly. Accordingly, the scores and rankings in respect of only those candidates who have opted for disclosing the above details or else have inadvertently not exercised their option, will be made available on the website of the Commission.

18. Important Instructions to Candidates:

- (i) The Examination will comprise of a Computer Based Examination of two hours having two parts (Part-I& Part-II).

- (ii) The Commission will not undertake detailed scrutiny of applications for the eligibility and other aspects at the time of examination and, therefore, the applications will be accepted provisionally only. The candidates are advised to go through the requirements of educational qualification, age etc. and satisfy themselves that they are eligible before applying. Copies of supporting documents will be sought at the time of document verifications. When such scrutiny is undertaken, if any claim made in the application is not found substantiated, the candidature will be cancelled and the Commission's decision in this regard shall be final.
- (iii) Candidates seeking reservation benefits available for SC/ ST/ OBC/ PH must ensure that they are entitled to such reservation as per eligibility prescribed in the Notice. They should also be in possession of the certificates in the prescribed format in support of their claim.
- (iv) Candidates with physical disability of 40% and more only would be considered as PHYSICALLY HANDICAPPED (PH) and entitled to reservation for PH.
- (v) Central Government civilian employees claiming age relaxation should produce a certificate in the prescribed format from their office at the time of document verification in respect of the length of continuous service which should be for not less than three years during the period immediately preceding the closing date for receipt of application. They should remain Central Government civilian employees till the time of appointment in the event of their selection.
- (vi) FEE: Rupees One Hundred Only (Rs.100/-). Women candidates and candidates belonging to Scheduled Caste, Scheduled Tribe and Physically Handicapped are exempted from paying application fee as per extant Government Orders.
- (vii) CLOSING DATE: 04.08.2017 (5.00 PM).
- (viii) Only one online application is allowed to be submitted by a candidate for Examination for the post of Scientific Assistant-2017. Therefore, the candidates are advised to exercise due diligence at the time of filling their application forms. If at later stage it is detected that a candidate is allotted more than one registration number and candidate has appeared more than once in the examination then his candidature will summarily be rejected.
- (ix) Mobiles and other electronic gadgets are banned within the premises of the examination centres. Possession of such equipments, whether in use or in switch off mode, during the examination will be considered as use of unfair means. Candidature of such candidates will be cancelled. They will be liable for further action including initiation of criminal proceedings and debarment from commission's examination upto 3 (three) years, as may be decided by the commission.
- (x) The facility of on-line application (including payment of fees through online mode) will be available from 18.07.2017 to 04.08.2017 (5.00PM). However, candidates who wish to make the payment through challan of SBI, may make the payment to designated branches of SBI within the working hours of bank upto 08.08.2017 provided the challan has been generated by them before 5.00 PM on 04.08.2017. Candidates should retain the Registration ID assigned to them online and details of payment of fee for further correspondence with the Commission. They should not submit print out of their application to the Commission.
- (xi) Fee paid by modes other than SBI challan or online payment through Net Banking (SBI)/ Credit and Debit Cards from any Bank, will not be accepted and the applications of such candidates will be rejected and the payment made shall stand forfeited.
- (xii) The candidates must write their name, date of birth, father's name and mother's name strictly as given in the matriculation certificate otherwise their

candidature will summarily be cancelled at the time of document verification or as and when it comes into the notice of the commission.

- (xiii) Only the Date of Birth as recorded in the Matriculation / Secondary Examination Certificate will be accepted as proof of date of birth.
- (xiv) Candidates should bring 3 passport size colour photographs. Candidates not carrying photographs may not be allowed to appear in the written examination.
- (xv) The posts carry All India Service Liability (AISL) i.e. the candidate, on selection, may be asked to serve anywhere in the country.
- (xvi) No admission certificates for aforesaid examination will be issued by post. Candidates are required to download admission certificate for the examination from the website of concerned Regional/Sub-Regional Offices.
- (xvii) The photograph should be uploaded in JPG format and the digital size of the file of the photographs must be more than 4 KB and less than 20KB.
- (xviii) The signature must be uploaded in JPG format. The digital size of the signature file must be between 1 KB and less than 12 KB.
- (xix) Application with illegible/blurred Signature and/or Photograph will be rejected summarily.
- (xx) Request for change/correction in any particulars in the Application Form, once submitted will not be entertained under any circumstances.
- (xxi) The candidates who are debarred from the examinations of the Commission, must not apply. Candidature of such candidates will be summarily rejected/ cancelled, whenever it comes to the notice of the Commission.
- (xxii) Further correspondence regarding this examination will be sent by e-mail/ SMS only to the E-mail ID and mobile number provided by the candidate in his/ her online applications. Commission will not be responsible if the information/intimations do not reach candidates due to change in mobile number/ e-mail ID/ any technical fault or otherwise.
- (xxiii) Candidate may keep close watch on the websites of the Commission, respective regional office and Indian Meteorological Department for further update/information about the examination.
- (xxiv) **For format of certificates/annexures, please visit www.ssc.nic.in .**

For detailed instructions relating to Application Form, instructions for filling up the application form and for on-line payment/ submission of application, candidates are advised to refer to Annexure- I

Under Secretary (P&P-1)

Annexure-I

Procedure for Online Submission of Application

1. On-line application will be available w.e.f. 18-07-2017 to 04-08-2017 (up to 5.00 PM)
2. The Commission has devised a simplified format for the online application procedure. In the process candidates may register once and may apply for any examination conducted by SSC.
3. One-time registration is the permanent database of candidates. The Registration ID and password provided by the system should be noted by the candidate and kept safely so that it can be used for applying to any examination conducted by SSC. The registration facility is available to the candidates throughout the year on website <http://ssconline.nic.in>. The registered candidates may log into the system and can proceed for application filling. The facility of online application (including payment of fees through SBI net banking/ Credit or debit cards of any banks) will be available from 18-07-2017 to 04.08.2017 (up to 5.00 PM). However, candidates who wish to make the payment through challan of SBI, may make the payment to designated branches of SBI within the working hours of bank upto 04.08.2017 provided the challan has been generated by them before 5.00 PM on 04.08.2017.
4. The online submission of the application may be made at website <http://ssconline.nic.in>. Candidate should read the instructions in this Notice carefully before making any entry. Candidate should provide all the required details while filling up the online form. Mandatory fields are marked with * (asterisk) sign. The filling of online application contains two parts: Registration Part (In case not registered earlier) and Application Part.
5. In Registration Part, candidates will have to provide their basic information and upload their photograph (in JPG format, having digital size between 4 KB and 20 KB) and signature (in JPG format, having digital size between 1 KB and 12 KB). On submission of these details, candidates shall be prompted to check the details and make any correction in the registration.
6. In case, there is any discrepancy in 'one-time registration' data filled by the candidate, photograph / signature etc, 'one-time registration' data may be suitably edited before proceeding to fill online application form. The Commission allows editing of information like name, father's name, mother's name, date of birth, gender and matriculation roll number only once after registration. Therefore, these fields **MUST BE ENTERED / EDITED VERY CAREFULLY**. Other fields in the 'one-time registration' can be edited once before every exam but prior to submission of application for examination. **SUCH EDITING IS ALLOWED BEFORE SUBMISSION OF APPLICATION. ONCE THE APPLICATION HAS BEEN SUBMITTED, NO CHANGE IN 'One-time Registration' and Application data will be allowed.**
7. Then a candidate can proceed to fill online application with Registration ID and password provided in the one-time registration process. **The application procedure is incomplete without application part.** Application part requires filling of information about choice of centres, education qualification, making payment of examination fee, etc.

8. To pay fee in cash, candidates should take print-out of the challan generated online after completion of Application Part and deposit the requisite fee in designated branch of State Bank of India within the stipulated date and time.
9. **Request for change/ correction in any particulars in the Application Form shall not be entertained under any circumstances.** The Staff Selection Commission will not be responsible for any consequences arising out of non acceptance of any correction/ addition/ deletion in any particular filled in application form whatever the reasons may be.
10. The application form without photograph/ signature or with blurred photograph/ signature or incomplete in any manner will be rejected summarily

ANNEXURE-II

FORM OF CERTIFICATE TO BE SUBMITTED BY CENTRAL GOVERNMENT CIVILIAN EMPLOYEES SEEKING AGE-RELAXATION

(To be filled by the Head of the Office or Department in which the candidate is working).
(Please see Para 4(B) of the Notice)

It is certified that *Shri/Smt./Km. _____ is a Central Government Civilian employee holding the post of ----- in the pay scale of Rs. _____ with 3 years regular service in the grade as on closing date. There is no objection to his appearing for Combined Graduate Level Examination, 2017.

Name _____ Signature _____

Office seal

Place:

Date :

(*Please delete the words which are not applicable.)

ANNEXURE- III

Form of Certificate for serving Defence Personnel (*Please see Para-4(B) of Notice for the Examination*)

I hereby certify that, according to the information available with me (No.) _____ (Rank) _____ (Name) _____ is due to complete the specified term of his engagement with the Armed Forces on the (Date) _____.

Place:

(Signature of Commanding Officer)

Date:

Office Seal:

UNDERTAKING TO BE GIVEN BY THE CANDIDATE COVERED UNDER
PARA4(B) OF NOTICE.

I understand that, if selected on the basis of the recruitment/examination to which the application relates, my appointment will be subject to my producing documentary evidence to the satisfaction of the Appointing Authority that I have been duly released/retired/discharged from the Armed Forces and that I am entitled to the benefits admissible to Ex-Servicemen in terms of the Ex-Servicemen (Re-employment in Central Civil Services and Posts rules, 1979, as amended from time to time).

I also understand that I shall not be eligible to be appointed to a vacancy reserved for Ex-S in regard to the recruitment covered by this examination, if I have at any time prior to such appointment, secured any employment on the civil side (including Public Sector Undertakings, Autonomous Bodies/Statutory Bodies, Nationalized Banks, etc.) by availing of the concession of reservation of vacancies admissible to Ex-S, except as per Department of Personnel and Training OM No. 36034/1/2014-Estt(Res) dated 14.08.2014.

I further submit the following information:

- a) Date of appointment in Armed Forces _____
- b) Date of discharge _____
- c) Length of service in Armed Forces _____
- d) My last Unit / Corps _____

(Signature of the Candidate)

Place:

Date:

FORMAT FOR SC/ ST CERTIFICATE

A candidate who claims to belong to one of the Scheduled Caste or the Scheduled Tribes should submit in support of his claim an attested/certified copy of a certificate in the form given below, from the District Officer or the sub-Divisional Officer or any other officer as indicated below of the District in which his parents(or surviving parent) ordinarily reside who has been designated by the State Government concerned as competent to issue such a certificate. If both his parents are dead, the officer signing the certificate should be of the district in which the candidate himself ordinarily resides otherwise than for the purpose of his own education. Wherever photograph is an integral part of the certificate, the Commission would accept only attested photocopies of such certificates and not any other attested or true copy.

(The format of the certificate to be produced by Scheduled Castes and Scheduled Tribes candidates applying for appointment to posts under Government of India)

This is to certify that Shri/Shrimati/Kumari* _____
son/daughter of _____ of village/town/* in
District/Division * _____ of the State/Union Territory* _____
belongs to the Caste/Tribes _____ which is recognized as a Scheduled
Castes/Scheduled Tribes* under:-

The Constitution (Scheduled Castes) order, 1950 _____

The Constitution (Scheduled Tribes) order, 1950 _____

The Constitution (Scheduled Castes) Union Territories order, 1951 * _____ The
Constitution (Scheduled Tribes) Union Territories Order, 1951* _____

As amended by the Scheduled Castes and Scheduled Tribes Lists(Modification) order, 1956, the Bombay Reorganization Act, 1960 & the Punjab Reorganization Act, 1966, the State of Himachal Pradesh Act 1970, the North-Eastern Area(Reorganization) Act, 1971 and the Scheduled Castes and Scheduled Tribes Order(Amendment) Act, 1976.

The Constitution (Jammu & Kashmir) Scheduled Castes Order, 1956 _____

The Constitution (Andaman and Nicobar Islands) Scheduled Tribes Order, 1959 as amended by the Scheduled Castes and Scheduled Tribes order (Amendment Act), 1976*.

The Constitution (Dadra and Nagar Haveli) Scheduled Castes order 1962.

The Constitution (Dadra and Nagar Haveli) Scheduled Tribes Order 1962@.

The Constitution (Pondicherry) Scheduled Castes Order 1964@

The Constitution (Scheduled Tribes) (Uttar Pradesh) Order, 1967 @

The Constitution (Goa, Daman & Diu) Scheduled Castes Order, 1968@

The Constitution (Goa, Daman & Diu) Scheduled Tribes Order 1968 @

The Constitution (Nagaland) Scheduled Tribes Order, 1970 @

The Constitution (Sikkim) Scheduled Castes Order 1978@

The Constitution (Sikkim) Scheduled Tribes Order 1978@

The Constitution (Jammu & Kashmir) Scheduled Tribes Order 1989@

The Constitution (SC) orders (Amendment) Act, 1990@

The Constitution (ST) orders (Amendment) Ordinance 1991 @

The Constitution (ST) orders (Second Amendment) Act, 1991 @

The Constitution (ST) orders (Amendment) Ordinance 1996

The Scheduled Caste and Scheduled Tribes Orders(Amendment)Act,2002

The Constitution (Scheduled Caste) Orders (Amendment) Act,2002

The Constitution (Scheduled Caste and Scheduled Tribes) Orders (Amendment) Act, 2002

%2. Applicable in the case of Scheduled Castes, Scheduled Tribes persons who have migrated from one State/Union Territory Administration.

This certificate is issued on the basis of the Scheduled Castes/ Scheduled tribes certificate issued to Shri/Shrimati _____ Father/mother _____ of Shri/Srimati/Kumari* _____ of village/town* _____ in District/Division* _____ of the State/Union Territory* _____ who belong to the _____ Caste/Tribe which is recognized as a Scheduled Caste/Scheduled Tribe in the State/Union Territory* issued by the _____ dated _____.

%3. Shri/Shrimati/Kumari and /or * his/her family ordinarily reside(s) in village/town* _____ of District/Division* _____ of the State/Union Territory of _____

Signature _____
** Designation _____
(with seal of office)

Place _____

Date _____

* Please delete the words which are not applicable

@ Please quote specific presidential order

% Delete the paragraph which is not applicable.

NOTE: The term ordinarily reside(s) used here will have the same meaning as in section 20 of the Representation of the People Act, 1950.

** **List of authorities empowered to issue Caste/Tribe Certificates:**

(i) District Magistrate/Additional District Magistrate/Collector/Deputy Commissioner/Additional Deputy Commissioner/Dy. Collector/ 1st Class Stipendiary Magistrate/Sub-Divisional Magistrate/Extra-Assistant Commissioner/Taluka Magistrate/Executive Magistrate.

(ii) Chief Presidency Magistrate/Additional Chief Presidency Magistrate/Presidency Magistrate.

(iii) Revenue Officers not below the rank of Tehsildar.

(iv) Sub-Divisional Officers of the area where the candidate and/or his family normally resides.

NOTE: ST candidates belonging to Tamil Nadu state should submit caste certificate ONLY FROM THE REVENUE DIVISIONAL OFFICER.

ANNEXURE-VI

(FORM OF CERTIFICATE TO BE PRODUCED BY OTHER BACKWARD CLASSES APPLYING FOR APPOINTMENT TO POSTS UNDER THE GOVERNMENT OF INDIA)

This is to certify that Shri /Smt./Kumari _____ son/daughter of _____ of village/town _____ in District/Division _____ in the State/Union Territory _____ belongs to the _____ Community which is recognized as a backward class under the Government of India, Ministry of Social Justice and Empowerment's Resolution No. _____ dated _____. Shri/Smt./Kumari _____ and/or his/her family ordinarily reside(s) in the _____ District/Division of the _____ State/Union Territory. This is also to certify that he/she does not belong to the persons/sections (Creamy Layer) mentioned in Column 3 of the Schedule to the Government of India, Department of Personnel & Training O.M. No. 36012/22/93-Estt (SCT) dated 8.9.1993**.

District Magistrate: _____

Deputy Commissioner etc.: _____

Dated:

Seal:

* The authority issuing the certificate may have to mention the details of Resolution of Government of India, in which the caste of the candidate is mentioned as OBC.

** As amended from time to time.

Note: The term "Ordinarily" used here will have the same meaning as in Section 20 of the Representation of the People Act, 1950.

**DISABILITY CERTIFICATE
(IN CASE OF AMPUTATION OR COMPLETE PERMANENT PARALYSIS OF
LIMBS AND IN CASES OF BLINDNESS)**

(See rule 4)

(NAME AND ADDRESS OF THE MEDICAL AUTHORITY ISSUING THE CERTIFICATE)

Recent PP size Attested Photograph (showing face only) of the person with disability

Certificate No. _____

Date: _____

This is to certify that I have carefully examined Shri/Smt/Kum _____ Son/wife/daughter
of Shri _____ Date of Birth _____ (DD/ MM/ YY)

Age _____ years, male/Female _____

Registration No. _____ permanent resident of House No _____
Ward/Village/Street _____ Post Office _____ District _____
State _____

Whose photograph is affixed above, and am satisfied that :

(A) he/she is a case of:

- locomotors disability
- blindness

(Please tick as applicable)

(B) The diagnosis in his/her case _____

(A) He/She has _____% (in figure) _____ percent (in words)
permanent physical impairment/blindness in relation to his/her _____(part of body)
as per guidelines(to be specified).

2. The applicant has submitted the following document as proof of residence:-

Nature of Document	Date of Issue	Details of authority issuing certificate.

(Signature and Seal of Authorised Signatory of
notified Medical Authority)

Signature/Thumb impression of the person in whose favour disability certificate is issued.
--

Essential Educational Qualification Code

Educational Qualification	Code
Bachelor's Degree in Science with Physics as one of the subject	03
Bachelor's Degree in Computer Science	04
Bachelor's Degree in Information Technology	05
Bachelor's Degree in Computer Applications	06
Bachelor's Degree (Equivalent)	07
Diploma in Electronics and Telecommunication Engineering after (10+2) Examination	08
Diploma (Equivalent)after (10+2) Examination	09

Note: The Applicant must have passed 10+2 Examination from a Recognized Board or equivalent in Science with Physics and Mathematics as core subjects.