

GUIDELINES OF THE SYLLABUS FOR COMPETITIVE EXAMINATION OF ASSISTANT DIRECTOR (BS-17) (SURVEY OF PAKISTAN), 2018

(A) Compulsory Papers

| 1. (1) Islamiat: | <u>Duration of Paper</u> | <u>Total Marks</u> |
|------------------|--------------------------|--------------------|
| | 03 hours | 100 |

Basic Principles of Islam.

- (i) Articles of faith.
- (ii) The Concept and Spirit of Tauheed.
- (iii) Finality of Prophethood.
- (iv) Practices of Islam.

(2) Islamic History:

- (i) The Holy Prophet of Islam, Perfect personality Main Events of his life. Conception of Sunnah.
- (ii) Brief Survey of the following: —
Khulfa-i-Rashideen, Umayyads; Abbassids; Muslims in Spain and North Africa, Post Mongol Muslim period (Persian, Ottoman Turks, Muslims in Indo-Pakistan sub-continent) ; Islam in the 19th and 20 centuries; The world of Islam today.
- (iii) The Holy Quran, its revelation, compilation and basic principles. Salient characteristics: —
 - (a) its revelation and compilation.
 - (b) Certain basic principles:
 - (i) Duty towards Allah (Submission to his Laws).
 - (ii) Duty towards Society (Equality, justice and honesty intellectual as well as financial).
 - (iii) Duty towards Nature. — [Understanding (through experimentation), conquest and domination of the forces of nature in the service of Allah].
 - (iv) Duty towards. — (Moral development and purification with an object to serve God's people).

Note: The non-muslim candidates have the option to take Islamiat as one of the Compulsory subject or otherwise paper of Pakistan Studies will be treated of 200 marks in their case and half of the total marks obtained by them in the paper of Pakistan Studies will be counted in lieu of Islamiat.

| 2. Pakistan Studies | <u>Duration of Paper</u> | <u>Total Marks</u> |
|---------------------|--------------------------|--------------------|
| | 03 hours | 100 |

1. The Pakistan Ideology.
2. Historical Background of Pak, Ideology.
3. Pakistan Movement & Political Struggle.
4. Establishment of Pakistan.
5. Our land Pakistan.
6. Pakistan role in Islamic and International World.



3. Mathematics (300 Marks)

| | | <u>Duration of Paper</u> | <u>Marks</u> |
|-----------|---|--------------------------|--------------|
| Paper-I | Algebra.—Quadratic equations. Theory of Quadratic Equations, Simultaneous Equations, Arithmetical, Geometrical and Harmonical Progressions, Miscellaneous Series Permutations and Combination, Binomial theorems, partial fractions and determinants. | 03 hours | 100 |
| Paper-II | Geometry.—First four and sixth books of Euclid with simple deductions and arithmetical illustrations. | 03 hours | 100 |
| Paper-III | Plane Trigonometry Measurement of Angles, sexageimal, Centesimal and Circular Systems, Trigonometrical Ratios and their graphs and formulae. Identities Trigonometrical Equations Heights and Distances areas of triangles and regular polygons, inverse circular functions, solution of triangles, Logarithms and menstruations. | 03 hours | 100 |

4. Drawing (200 Marks)

| | | <u>Duration of Paper</u> | <u>Marks</u> |
|----------|---|--------------------------|--------------|
| Paper-I | Free hand from copies. | 03 hours | 100 |
| Paper-II | Geometrical Drawing-Drawing plane, Geometrical Figures with compass and rule, hand printing and construction of scales of all kinds including diagonal scale. | 03 hours | 100 |

(B) Optional Papers

1. Survey (200 Marks)

| <u>Survey Paper-I</u> | <u>Duration of Paper</u> | <u>Marks</u> |
|---|--------------------------|--------------|
| | 03 hours | 100 |
| (Part-I) | | |
| Theoretical | | |
| Construction of scales. | | |
| Levelling. | | |
| Theodolite Traversing. | | |
| Triangulation. | | |
| Instruments: Their uses and adjustment. | | |
| Theodolite resection. | | |
| Computations in rectangular coordinates, | | |
| Planetabing....General Methods involved for various scales. | | |
| Coatouring by tangent clinometer | | |
| P.T. traverse and its adjustment. | | |
| Explanation of 2 and 3 points problems in Resection. | | |
| Astronomy.....(i) Elements of Spherical Trigonometry upto solution of | | |
| Spherical triangle and Napier's rule of circular parts. Definitions, Celestial | | |
| coordinates, Sidereal, Solar, and Meantime, Acceleration and retardation, Equation of | | |
| time. | | |



(Part-II)

- (a) Determination of Time by Sun and East and West Stars.
- (b) Determination of Azimuth by Sun and Stars.
- (c) Determination of Latitude when time and altitude are known.
- (d) Determination of Latitude by circummeridional altitudes.
- (e) Determination of Latitude by exmerdional altitude.
- (f) Astrofixation by position line method.
- (g) Conversion of Time.

Air Survey.....Elementary graphical methods (Radial Line plotting of Survey from air photography). Definitions of terms used in Aerial Survey.

Elementary knowledge of Map Projections.

Elements of Map reproduction.

Survey Paper-II (Practical)

Duration of Paper

Marks

03 hours

100

Tertiary leveling.

Plane tabling (large scale)

Sun Azimuth, observations and computation.

Map Drawing, in blue print, and hand lettering.

OR

2. Pure Mathematics (200 Marks)

Duration of Paper

Marks

03 hours

100

Paper-I Calculus and Analytic Geometry. —Complex number, Limits and Continuity, Derivatives and Anti-Derivatives, Differential Equations, Mean Value Theorems; Indeterminate Forms and Expansions; Definite Infinite Series, Plane Curves

Paper-II Mathematical Methods.—Analytical Geometry of three dimensions, Function of two variables, Surface areas, volumes and Centroids, C Groups; fields and vector Spaces, Matrices, Determinants and linear Equations;

OR

3. Geography (200 Marks)

Duration of Paper

Marks

03 hours

100

Paper-I Theoretical.—Physical Geography and Regional Geography.

Paper-II Practical.—Scale, Projections Map Reading, P.T. survey and contouring etc.

03 hours

100



OR

4. Physics (200 Marks)

| | <u>Duration of Paper</u> | <u>Marks</u> |
|---|--------------------------|--------------|
| Paper-I General Physics: Heat; Light; with emphasis on the applied side. | 03 hours | 100 |
| Paper-II Sound, Electricity and Magnetism, One or two questions may be set on Modern Physics, with emphasis on the applied side. | 03 hours | 100 |

OR

5 Chemistry (200 Marks)

| | <u>Duration of Paper</u> | <u>Marks</u> |
|---|--------------------------|--------------|
| Paper-I Physical Chemistry and in-Organic Chemistry. | 03 hours | 100 |
| Paper-II Organic Chemistry. | 03 hours | 100 |

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FEDERAL PUBLIC SERVICE COMMISSION

REGULATIONS FOR PHYSICAL EXAMINATION

**COMPETITIVE EXAMINATION (ASSISTANT DIRECTOR (BS-17),
SURVEY OF PAKISTAN), 2018**

These regulations are for the convenience of candidates and in order to enable them to ascertain the probability of their coming up to the required physical standard. But it must be clearly understood that the Government of Pakistan reserve to themselves an absolute discretion to reject as unfit any candidate whom they may consider, on the report of the Medical Board, to be physically disqualified for the Service and that their discretion is in no respect limited by these regulations. Save as provided in Regulation 2, these regulations are intended merely for the guidance of Medical Examiners and are not meant to restrict their discretion in any way.

1. To be passed as fit for appointment a candidate must be in good mental and bodily health and free from any physical defect likely to interfere with the efficient performance of the duties of his appointment.

CHEST MEASUREMENT

2. The candidate's chest will be measured as follows:-

He will be made to stand erect with his feet together and to raise his arms over his head. The tape will be so adjusted around the chest that its upper edge touches the interior angles of the shoulder blades behind and its lower edge the upper part of the nipple in front. The arms will then be lowered to hang loosely by the side, and care will be taken that the shoulders are not thrown upwards or backwards so as to displace the tape. The candidate will then be directed to take a deep inspiration several times and the maximum expansion of the chest will be carefully noted, and the minimum and maximum will then be recorded in inches, 33-35, 34-36 ½, etc. In accordance the measurements, fractions of less than ½ inch should not be noted.

3. A minimum chest measurement of 33 inches (girth when fully expanded with a minimum expansion of 2 inches) is required. In the matter of co-relation of age, height and chest-girth of candidates, it is left to the Medical Board to use whatever co-relation figures are considered most suitable as guide in the examination of the candidates.

HEIGHT MEASUREMENT

4. The candidate's height will be measured as follows:-

He will remove his shoes and be placed against the standard with his feet together and the weight thrown on the heels and not on the toes or outer sides of the feet. He will stand erect without rigidly and with the heels, calves, buttock and shoulders touching the standard, the chin will be depressed to bring the vertex of the head level under the horizontal bar, and the height will be recorded in inches and parts of an inch to quarters. Candidate whose height is less than 5 ft. will not be considered physically fit for appointment.

WEIGHT ASSESSMENT


5. The candidate will also be weighed and his weight recorded in pounds. Fractions of a pound should not be recorded.

VISUAL ACUITY

6. The candidate's eye sight will be tested in accordance with the following rules. The result of each test will be recorded:-

(i) **General.**— The candidate's eyes will be submitted to a general examination directed to the detection of any disease or abnormality. The candidate will be rejected if he suffers from any squint or morbid conditions of eyes, eye-lids or contiguous structures of much a sort as to render, or to be likely at a future date, to render him unfit for service.

(ii) **Visual Acuity.**—(a) The examination for determining the acuteness of vision includes two tests, one for distant, the other for near vision. Each eye will be examined separately. Snellen's test types will be used for the test for distant vision without glasses at a distance of 20 feet, and for the test for near vision, without glasses at any distance selected by the candidate.



(b) No candidates will be accepted whose Visual Acuity falls below the following standards:-

| | | Better eye | Worse eye |
|-------------------------------------|---------------------|---------------|--------------|
| Distant vision without glass | -- -- --- --- ----- | 6/12 | 6/18 |
| Corrected with glass | -- -- --- --- ----- | 6/6 | 6/9 |
| Near vision with or without glasses | -- -- --- --- ----- | 0.6 | 0.6 |

(iii) Colour perception, night blindness and field vision (a) Each eye will be examined separately and the lids must be kept wide upon during the test.

(b) Inability to distinguish the principal colours will not be regarded as a cause for rejection but the fact will be noted in the proceedings and the candidates will be informed

(c) Each eye must have a full filed of vision as tested by hand movements.

(iv) The degree of acuteness of vision of all candidates for appointment will be entered in the proceedings in the following manner:-

V.R....., with glasses..... Reads.....
V.L....., with glasses..... Reads.....

(v) In cases of serious abnormality the opinion of an ophthalmic specialist should be obtained.

Note:- No candidate will be accepted for appointment if his vision does not come/up to the requirements specified above without the use of contact glasses. (A correct glass or lens is defined as a glass of concavity of which is in contract with the globe of the eye, a layer the liquid being interposed between the lens and the cornea. The meaning of the word "glasses" whenever used above is to be interpreted as not covering contact glass).

7. The urine (passed in the presence of the examiner) should be examined and the result recorded.

8. The following additional points should be observed :-

- that the candidates hearing in each ear is good and that there is no sign of disease of the ear.
- that his speech is without impediment,
- that his teeth are in good order and that he is provided with denture where necessary for effective mastication (well filled teeth will be considered as sound).
- that his chest is well formed and his chest expansion sufficient an that his heart and lungs are sound.
- that there is no evidence of any abdominal disease,
- that he is not ruptured.
- that he does not suffer from hydrocele, a severe degree of varicocolo, varios ventine or piles,
- that his limbs, hands and feet are well formed and developed and that there is free and perfect motion of all his joints,
- that he does not suffer from any inveterate skin disease,
- that there is no congenital malformation or defect,
- that he does not bear traces of acute or chronic disease pointing to an impaired constitution.
- that he bears marks of efficient vaccination, and
- that he is free from communicable disease.

9. When any defect is found it must be noted in the certificate and the medical examiner should state his opinion whether are not it is likely to interfere with the efficient performance of the duties with which will be required of the candidates. If the condition is remediable by operation it should be so stated.

Note:- Candidates are warned that there is no right of appeal from a medical Board, special or standing, appointed to determine their fitness for the able services. If, however, Government are satisfied on the evidence produced to the of the possibility of an error of judgement in the decision of the first Board, it is open to Government to allow any appeal to a second Board.

