III A. HEARING IMPAIRMENT (DEAF AND HARD OF HEARING)

20.1. Definition:

(a) "Deaf" means persons having 70 DB hearing loss in speech frequencies in both ears;

(b) "Hard of hearing" means person having 60 DB to 70 DB hearing loss in speech frequencies in both ears;

20.2. Guidelines for Assessment:

20.2.1. Measurement Air Conduction Thresholds (ACT):

(a) ACT is to be measured using standard Pure Tone Audiometry by an Audiologist for Right Ear and Left Ear separately.

(b) In case of non-reliable ACT, additional tests are recommended such as Immittance, and Speech audiometry or Auditory Brainstem Response (ABR) Testing.

(c) Measuring ACT may be difficult in children aged 3-5 years. In such cases, Conditioned Pure Tone audiometry/Visual Reinforcement Audiometry (VRA) shall be conducted. ABR or Auditory Steady State Response (ASSR) testing can be advised for the estimation of ACT in infant and young children.

20.2.2 . Computation of Percentage of Hearing Disability:

(a) Monaural Percentage of Hearing Disability

(i) Calculate Pure tone average of ACT for 500 Hz, 1000 Hz, 2000 Hz, 4000 Hz for Right Ear and Left ear separately (whenever there is no response at any frequency ACT is to be considered as 95dB).

(ii) Monaural percentage of hearing disability is to be calculated as per the ready reckoner given below separately for Right Ear and Left Ear.

Monaural PTA in dB	% of Disability
0 to 25	0
26	1
27	1
28	1
29	1
30	1
31	1
32	1
33	1
34	2
35	3
36	4
37	5
38	6
39	7
40	8
41	9
42	10
43	11
44	12
45	13
46	14
47	15
48	16
49	17
50	18
51	19
52	20
53	21
54	22
55	23
56	24
57	25
58	26
59	27
60	40

Monaural PTA in dB	% of Disability
61	41.71
62	43.42
63	45.13
64	46.84
65	48.55
66	50.26
67	51.97
68	53.68
69	55.39
70	57.1
71	58.81
72	60.52
73	62.23
74	63.94
75	65.65
76	67.36
77	69.07
78	70.78
79	72.49
80	74.2
81	75.91
82	77.62
83	79.33
84	81.04
85	82.75
86	84.46
87	86.17
88	87.88
89	89.59
90	91.3
91	93.01
92	94.72
93	96.43
94	98.14
95	100

20.2.3. Percentage of Hearing Disability

Percentage of Hearing Disability =

$$\frac{\text{(Better ear \% of hearing disability X 5) + (Poorer ear \% of hearing disability)}}{6}$$

III B. SPEECH AND LANGUAGE DISABILITY

20.3.1. Definition: "Speech and language disability" means a permanent disability arising out of conditions such as laryngectomy or aphasia affecting one or more components of speech and language due to organic or neurological causes

20.3.2. Conditions affecting Speech Components for which Speech Disability certificate can be issued

- Laryngectomy
- Glossectomy
- Bilateral vocal cord paralysis
- Maxillofacial anomalies
- Dysarthria
- Apraxia of Speech

20.3.3. Computation of Percentage Speech Disability

(a) Speech Intelligibility Test

The verbal output of person should be evaluated using either Perceptual Speech intelligibility rating scale (AYJNISHD, 2003) or Perceptual Rating Scale (SRMC, Chennai) and percentage of Speech Intelligibility Affected (**SIA**) to be measured based on score as given below:

Score	Percentage of Speech Intelligibility Affected **(SIA)**
1	0-15
2	16-30
3	31-39
4	40-55
5	56-75
6	76-89
7	90- 100

(b) Voice Test

Consensus Auditory Perceptual Evaluation of Voice (CAPE-V) orDysphonia Severity Index (DSI) can be used for measuring percentage of Overall Voice Clarity Affected (OVCA) which includes roughness, breathiness, strain, pitch and loudness. Average score to be given weighted for the percentage of overall voice clarity affected

Score	Percentage of overall voice clarity affected (**OVCA**)
1	0-15
2	16-30
3	31-39
4	40-55
5	56-75
6	76-89
7	90-100

(c) Percentage of Speech Disability =

$$2 \times \frac{\text{Upper range of percentage of SIA+ Upper range of percentage of OVCA}}{3}$$

20.4.1. Conditions affecting Language Components for which Language Disability certificate can be issued

- Aphasia

20.4.2. Language Test

Western Aphasia Battery (WAB) in Indian languages is to be administered post six month of the onset of the stroke and Aphasia Quotient (AQ) is to be calculated as per standard procedure by an **Speech language pathologist.**

20.4.3. Percentage of Language Disability

Percentage of Language Disability can be computed directly from the ready reckoner given below by intersection of value for Number in Tens place in WAB score and Number in Unit place in WAB score. For example, if the AQ is 56, intersection of 5 (in column) and 6 (in row) is 40. The Percentage of Language Disability is 40%.

Number in Tens Place in WAB Score	**Number in Unit Place in WAB Score**									
	0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
0	100	98.9	97.8	96.8	95.7	94.6	93.6	92.5	91.4	90.4
1	89.3	88.2	87.2	86.1	85.0	84.0	82.9	81.8	80.8	79.7
2	78.6	77.6	76.5	75.4	74.4	73.3	72.2	71.2	70.1	69.0
3	68.0	66.9	65.8	64.8	63.7	62.6	61.6	60.5	59.4	58.4
4	57.3	56.2	55.2	54.1	53.0	52.0	50.9	49.8	48.8	47.7
5	46.6	45.6	44.5	43.4	42.4	41.3	40.0	39.2	38.1	37.1
6	36.0	34.9	33.9	32.8	31.7	30.7	29.6	28.5	27.5	26.4
7	25.3	24.3	23.2	22.1	21.1	20	18.9	17.9	16.8	15.7
8	14.7	13.6	12.5	11.5	10.4	09.3	8.3	07.2	06.1	05.1
9	4.0	2.9	1.9	0.8	00.0	00.0	00.0	00.0	00.0	00.0

20.4.4. Medical Authority. The Medical Superintendent or Chief Medical Officer or Civil Surgeon or any other equivalent authority as notified by the State Government shall be the head of the certification medical authority for the purpose of certification of hearing disability, and speech and language disability. The certification medical authority shall comprise of:

(i) Medical Superintendent or Chief Medical Officer or Civil Surgeon or any other equivalent authority
(ii) ENT Specialist
(iii) One specialist (audiologist/speech language pathologist) as nominated by the Medical Superintendent or Chief Medical Officer or Civil Surgeon or any other equivalent authority as notified by the State Government.

IV. INTELLECTUAL DISABILITY

21. Intellectual Disability

21.1. Definition - Intellectual disability, a condition characterised by significant limitation both in intellectual functioning (rasoning, learning, problem solving) and in adaptive behaviour which covers a range of every day, social and practical skills.