



ಕರ್ನಾಟಕ ಸರ್ಕಾರ

ಕಾಲೇಜು ಶಿಕ್ಷಣ ಇಲಾಖೆ ಆಯುಕ್ತರ ಕಛೇರಿಯ ನಡವಳಿಗಳು

ವಿಷಯ: ಕಾಲೇಜು ಶಿಕ್ಷಣ ಇಲಾಖಾವ್ಯಾಪ್ತಿಯ ಸ್ವಾಯತ್ತತೆ ಹೊಂದಿರುವ ಐದು ಸರ್ಕಾರಿ ಪದವಿ ಕಾಲೇಜುಗಳಿಗೆ ಅಗತ್ಯವಿರುವ ಐ.ಸಿ.ಟಿ.ಸೌಲಭ್ಯಗಳನ್ನು ಒದಗಿಸಿ ಗಣಕೀಕರಣಗೊಳಿಸಲು ಅನುದಾನ ಬಿಡುಗಡೆ ಮಾಡುವ ಬಗ್ಗೆ.

- ಉಲ್ಲೇಖ: 1. ಸರ್ಕಾರದ ಆದೇಶ ಸಂಖ್ಯೆ:ಇಡಿ/37/ಹೆಚ್‌ಪಿಸಿ/2016, ಬೆಂಗಳೂರು, ದಿನಾಂಕ:25.04.2016.
2. ಸರ್ಕಾರದ ಆದೇಶ ಸಂಖ್ಯೆ: ಇಡಿ/61/ಹೆಚ್‌ಪಿಸಿ/2016, ಬೆಂಗಳೂರು, ದಿನಾಂಕ:11.07.2016.
3. ದಿನಾಂಕ:08/11/2016ರಂದು ಅಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿಗಳು, ಶಿಕ್ಷಣ ಇಲಾಖೆ (ಉನ್ನತ ಶಿಕ್ಷಣ) ಇವರ ಅಧ್ಯಕ್ಷತೆಯಲ್ಲಿ ನಡೆದ ಇಲಾಖಾ ತಾಂತ್ರಿಕ ಸಲಹಾ ಸಮಿತಿ ಸಭೆಯ ನಡವಳಿಗಳು.
4. ದಿನಾಂಕ:15/11/2016ರಂದು ಪ್ರಧಾನ ಕಾರ್ಯದರ್ಶಿಗಳು, ಇ-ಆಡಳಿತ ಇವರ ಅಧ್ಯಕ್ಷತೆಯಲ್ಲಿ ನಡೆದ ವಾರ್ಷಿಕ ಇ-ಆಡಳಿತ ಯೋಜನೆಗಳ ಅನುಮೋದನಾ ಸಮಿತಿ ಸಭೆಯ ನಡವಳಿಗಳು.
5. ಸಮಸಂಖ್ಯೆಯ ಕಡತದ ಕಂಡಿಕೆ (16)ರ ಮಾನ್ಯ ಅಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿಗಳು, ಶಿಕ್ಷಣ ಇಲಾಖೆ (ಉನ್ನತ ಶಿಕ್ಷಣ) ಇವರ ಆದೇಶ.

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ಪ್ರಸ್ತಾವನೆ:

ಉಲ್ಲೇಖಿತ-1ರ ಸರ್ಕಾರದ ಆದೇಶದಲ್ಲಿ 2016-17ನೇ ಸಾಲಿಗೆ ಕಾಲೇಜು ಶಿಕ್ಷಣ ಇಲಾಖೆಯ 'ಸರ್ಕಾರಿ ಕಾಲೇಜುಗಳಲ್ಲಿ ವಿಜ್ಞಾನ ವಿಭಾಗಗಳನ್ನು ತೆರೆಯುವುದು' ಕಾರ್ಯಕ್ರಮದಡಿಯ ಆಯವ್ಯಯ ಲೆಕ್ಕ ಶೀರ್ಷಿಕೆ: 2202-03-103-2-04-059 (ಯೋಜನೆ) ರಡಿಯಲ್ಲಿ ಒದಗಿಸಿರುವ ಅನುದಾನದಡಿ ಕಾಲೇಜು ಶಿಕ್ಷಣ ಇಲಾಖಾವ್ಯಾಪ್ತಿಯ ಕ್ರಿಯಾ ಯೋಜನೆಗೆ ಉಲ್ಲೇಖ (2)ರ ಸರ್ಕಾರದ ಆದೇಶದಲ್ಲಿ ಅನುಮೋದನೆಯನ್ನು ನೀಡಲಾಗಿರುತ್ತದೆ. ಈ ಅನುದಾನದ ಮಿತಿಯೊಳಗೆ ಇಲಾಖಾವ್ಯಾಪ್ತಿಯ ಸ್ವಾಯತ್ತತೆ ಹೊಂದಿರುವ ಸರ್ಕಾರಿ ಪ್ರಥಮ ದರ್ಜೆ ಕಾಲೇಜುಗಳಿಗೆ ಅಗತ್ಯವಿರುವ ಗಣಕಯಂತ್ರ ಹಾಗೂ ಪೂರಕ ಉಪಕರಣಗಳನ್ನು ಒದಗಿಸುವ ಸಲುವಾಗಿ ರೂಪಿಸಿದ್ದ ಇ-ಆಡಳಿತ ಕ್ರಿಯಾ ಯೋಜನೆಗೆ ಉಲ್ಲೇಖಿತ (2) ಮತ್ತು (3)ರಂತೆ ಅನುಮೋದನೆಯನ್ನು ದೊರೆತಿರುತ್ತದೆ. ಉಲ್ಲೇಖ(4)ರ ಇಲಾಖಾ ತಾಂತ್ರಿಕ ಸಲಹಾ ಸಮಿತಿಯ ಸಭೆಯಲ್ಲಿ ಅನುಮೋದಿಸಿರುವಂತೆ 05 ಸ್ವಾಯತ್ತತೆ ಹೊಂದಿರುವ ಸರ್ಕಾರಿ ಪ್ರಥಮ ದರ್ಜೆ ಕಾಲೇಜುಗಳಿಗೆ ಅಗತ್ಯವಿರುವ ಗಣಕಯಂತ್ರ ಹಾಗೂ ಪೂರಕ ಉಪಕರಣಗಳನ್ನು ಖರೀದಿಸಿಕೊಳ್ಳಲು ಅನುದಾನ ಬಿಡುಗಡೆ ಮಾಡಲು ಈ ಆದೇಶ.

ಆದೇಶ ಸಂಖ್ಯೆ: ಕಾಶಿಇ/ಮಾತಂವಿ/47/ಸ್ವಾ.ಕಾ.ಗ./2016-17, ಬೆಂಗಳೂರು, ದಿನಾಂಕ: 01/02/2017.

ಪ್ರಸ್ತಾವನೆಯಲ್ಲಿ ವಿವರಿಸಿರುವಂತೆ, 2016-17ನೇ ಸಾಲಿಗೆ ಕಾಲೇಜು ಶಿಕ್ಷಣ ಇಲಾಖೆಯ 'ಸರ್ಕಾರಿ ಕಾಲೇಜುಗಳಲ್ಲಿ ವಿಜ್ಞಾನ ವಿಭಾಗಗಳನ್ನು ತೆರೆಯುವುದು' ಕಾರ್ಯಕ್ರಮದಡಿಯ ಆಯವ್ಯಯ ಲೆಕ್ಕ ಶೀರ್ಷಿಕೆ: 2202-03-103-2-04-059 (ಯೋಜನೆ) ರಡಿಯಲ್ಲಿ ಒದಗಿಸಿರುವ ಅನುದಾನದ ಮಿತಿಯೊಳಗೆ ಈ ಆದೇಶಕ್ಕೆ ಅನುಬಂಧಿಸಿರುವ ತಾಂತ್ರಿಕ ವಿಶಿಷ್ಟತೆಗಳನ್ನು (Technical Specifications) ಹೊಂದಿರುವ ಮತ್ತು ಅಗತ್ಯವಿರುವ

ಸಂಖ್ಯೆಯ ಗಣಕಯಂತ್ರ ಹಾಗೂ ಪೂರಕ ಉಪಕರಣಗಳನ್ನು ಖರೀದಿಸಿಕೊಳ್ಳಲು ಕೆಳಕಂಡ 05 ಸರ್ಕಾರಿ ಪ್ರಥಮ ದರ್ಜೆ ಕಾಲೇಜುಗಳಿಗೆ ಅನುದಾನವನ್ನು ಬಿಡುಗಡೆ ಮಾಡಲಾಗಿದೆ ಹಾಗೂ ಈ ಅನುದಾನವನ್ನು ಸರ್ಕಾರಿ ನಿಯಮಗಳನ್ವಯ ಕೆಳಕಂಡ ಷರತ್ತುಗಳಿಗೊಳಪಟ್ಟು ಬಳಸಿಕೊಳ್ಳಲು ಸಂಬಂಧಿಸಿದ ಕಾಲೇಜುಗಳ ಪ್ರಾಂಶುಪಾಲರುಗಳಿಗೆ ಅನುಮತಿ ನೀಡಲಾಗಿದೆ.

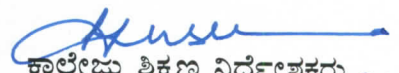
ಕ್ರ. ಸಂ.	ಕಾಲೇಜಿನ ಹೆಸರು	ಬಿಡುಗಡೆ ಮಾಡಿರುವ ಅನುದಾನ ರೂ. ಲಕ್ಷಗಳಲ್ಲಿ
1	ಸರ್ಕಾರಿ ವಿಜ್ಞಾನ ಕಾಲೇಜು, ನೃಪತುಂಗ ರಸ್ತೆ, ಬೆಂಗಳೂರು	44,00,000
2	ಸರ್ಕಾರಿ ಪ್ರಥಮದರ್ಜೆ ಕಾಲೇಜು, ಗುಬ್ಬಿ, ತುಮಕೂರು ಜಿಲ್ಲೆ	44,00,000
3	ಸರ್ಕಾರಿ ಮಹಿಳಾ ಕಾಲೇಜು, ಎಂ.ಸಿ.ರಸ್ತೆ, ಮಂಡ್ಯ	44,00,000
4	ಸರ್ಕಾರಿ ವಿಜ್ಞಾನ ಕಾಲೇಜು, ಹಾಸನ	44,00,000
5	ಸರ್ಕಾರಿ ಕಲಾ ಕಾಲೇಜು, ಚಿತ್ರದುರ್ಗ	44,00,000
ಒಟ್ಟು		2,20,00,000
ರೂಪಾಯಿಗಳು ಎರಡು ಕೋಟಿ ಇಪ್ಪತ್ತು ಲಕ್ಷಗಳು ಮಾತ್ರ		

ಷರತ್ತುಗಳು:

- 1) ಎಲ್ಲಾ ವಿವಿಧ ಖರೀದಿಗಳಿಗೆ ಸಂಬಂಧಿಸಿದಂತೆ, ಪ್ರಚಲಿತವಿರುವ ಎಲ್ಲಾ ಖರೀದಿ ನಿಯಮಗಳನ್ನು ಹಾಗೂ ಕರ್ನಾಟಕ ಸಾರ್ವಜನಿಕ ಸಂಗ್ರಹಣೆಗಳಲ್ಲಿ ಪಾರದರ್ಶಕತೆ ಅಧಿನಿಯಮ 2000ರ (ಕೆ.ಟಿ.ಪಿ.ಪಿ) ಮತ್ತು ಅದರಡಿಯಲ್ಲಿನ ನಿಯಮಗಳನ್ನು ಚಾಚೂ ತಪ್ಪದೇ ಕಡ್ಡಾಯವಾಗಿ ಹಾಗೂ ಕಟ್ಟುನಿಟ್ಟಾಗಿ ಪಾಲಿಸತಕ್ಕದ್ದು.
- 2) ಇಲಾಖಾ ತಾಂತ್ರಿಕ ಸಲಹಾ ಸಮಿತಿಯಲ್ಲಿ ಅನುಮೋದಿತ ತಾಂತ್ರಿಕ ವಿಶಿಷ್ಟತೆಗಳನ್ನು (Technical Specifications) ಅನುಬಂಧಿಸಿದ್ದು, ಸದರಿ ತಾಂತ್ರಿಕ ವಿಶಿಷ್ಟತೆಗಳನ್ನು (Technical Specifications) ಹೊಂದಿರುವ ಮತ್ತು ನಿಗದಿಪಡಿಸಿರುವ ಸಂಖ್ಯೆಯ ಗಣಕಯಂತ್ರ ಹಾಗೂ ಪೂರಕ ಉಪಕರಣಗಳನ್ನು ಮಾತ್ರ ಖರೀದಿಸಿ ಅನುಸ್ಥಾಪಿಸಿಕೊಳ್ಳಬೇಕು.
- 3) ಇ-ಆಡಳಿತ ಇಲಾಖೆಯ ನೊಂದಾಯಿತ ಸಂಸ್ಥೆಯಿಂದ ಖರೀದಿಸಲಾದ ಎಲ್ಲಾ ಗಣಕಯಂತ್ರ ಹಾಗೂ ಪೂರಕ ಉಪಕರಣಗಳ ತಾಂತ್ರಿಕ ವಿಶಿಷ್ಟತೆ (Technical Specifications) ಹಾಗೂ ಗುಣಮಟ್ಟವನ್ನು ಇ-ಆಡಳಿತ ಇಲಾಖೆಯ ನೊಂದಾಯಿತ ಸಂಸ್ಥೆಯಿಂದ ಖಚಿತಪಡಿಸಿಕೊಂಡು ನಂತರ ಬಿಲ್ಲಿನ ಪಾವತಿಗೆ ಕ್ರಮವಹಿಸುವುದು.
- 4) ಈ ವೆಚ್ಚವನ್ನು 2017 ರ ಮಾರ್ಚ್ ಮಾಹೆಯೊಳಗಾಗಿ ಭರಿಸಿ, "ಹಣ ಬಳಕೆಯ ಪ್ರಮಾಣ ಪತ್ರ"ಗಳನ್ನು ಈ ಕಛೇರಿಗೆ ಸಲ್ಲಿಸತಕ್ಕದ್ದು.
- 5) ಬಿಡುಗಡೆಯಾಗಿರುವ ಅನುದಾನವನ್ನು ನಿಗದಿಪಡಿಸಿದ ಉದ್ದೇಶಗಳಿಗೆ ಮಾತ್ರ ಬಳಸತಕ್ಕದ್ದು.
- 6) ಬಿಡುಗಡೆಯಾದ ಅನುದಾನವು ನಿಗದಿಪಡಿಸಿದ ಉದ್ದೇಶಕ್ಕಾಗಿ ಅವಶ್ಯವಿಲ್ಲದೇ ಇದ್ದಲ್ಲಿ, ಸದರಿ ಅನುದಾನವನ್ನು ಇನ್ನಿತರ ಉದ್ದೇಶಗಳಿಗೆ ಬಳಸಿಕೊಳ್ಳದೇ ತಕ್ಷಣವೇ ಇಲಾಖೆಗೆ ಮರು ಒಪ್ಪಿಸತಕ್ಕದ್ದು.
- 7) ಬಿಡುಗಡೆ ಮಾಡಲಾದ ಅನುದಾನದ ಖರ್ಚು-ವೆಚ್ಚಗಳನ್ನು ಲೆಕ್ಕ ತಪಾಸಣೆಗೆ ಒಳಪಡಿಸತಕ್ಕದ್ದು.

ಈ ಮೇಲ್ಕಂಡ ಷರತ್ತುಗಳನ್ನು ಕಡ್ಡಾಯವಾಗಿ ಅನುಸರಿಸಿ ಬಿಡುಗಡೆಯಾದ ಅನುದಾನವನ್ನು ಸದ್ಭಳಕೆ ಮಾಡಿಕೊಳ್ಳುವಲ್ಲಿ ಅಗತ್ಯ ಕ್ರಮಗಳನ್ನು ಕೈಗೊಳ್ಳುವುದು ಹಾಗೂ ಈ ಷರತ್ತುಗಳು ಉಲ್ಲಂಘನೆಯಾಗದಂತೆ ಸಂಬಂಧಿಸಿದ ಕಾಲೇಜುಗಳ ಪ್ರಾಂಶುಪಾಲರುಗಳು ಎಚ್ಚರ ವಹಿಸುವುದು.

"ಟಿಪ್ಪಣಿ ಆಯುಕ್ತರಿಂದ ಅನುಮೋದಿಸಲ್ಪಟ್ಟಿದೆ"


ಕಾಲೇಜು ಶಿಕ್ಷಣ ನಿರ್ದೇಶಕರು
✓

ಇವರಿಗೆ:

- 1) ಸಂಬಂಧಿಸಿದ ಕಾಲೇಜುಗಳ ಪ್ರಾಂಶುಪಾಲರುಗಳಿಗೆ.
- 2) ಪ್ರಾದೇಶಿಕ ಜಂಟಿ ನಿರ್ದೇಶಕರು, ಕಾಲೇಜು ಶಿಕ್ಷಣ ಇಲಾಖೆ, ಪ್ರಾದೇಶಿಕ ಕಛೇರಿ, ಬೆಂಗಳೂರು, ಮೈಸೂರು, ಶಿವಮೊಗ್ಗ - ತಮ್ಮ ವ್ಯಾಪ್ತಿಗೊಳಪಡುವ ಕಾಲೇಜುಗಳಿಗೆ ಬಿಡುಗಡೆಯಾದ ಅನುದಾನದ ಬಗ್ಗೆ ಮೇಲುಸ್ತುವಾರಿ ವಹಿಸಿ, ಅನುದಾನವನ್ನು ಸಮರ್ಪಕವಾಗಿ ಸದ್ಭಳಕೆ ಮಾಡಿಕೊಳ್ಳುವ ನಿಟ್ಟಿನಲ್ಲಿ ಸೂಕ್ತ ನಿರ್ದೇಶನಗಳನ್ನು ನೀಡುವಂತೆ ಸೂಚಿಸಲಾಗಿದೆ.

- 3) ಲೆಕ್ಕಾಧಿಕಾರಿಗಳು, ಕೇಂದ್ರ ಕಛೇರಿ, ಕಾಲೇಜು ಶಿಕ್ಷಣ ಇಲಾಖೆ, ಬೆಂಗಳೂರು.
- 4) ಮಾಹಿತಿ ತಂತ್ರಜ್ಞಾನ ಅಧಿಕಾರಿಗಳು, ಕೇಂದ್ರ ಕಛೇರಿ, ಕಾಲೇಜು ಶಿಕ್ಷಣ ಇಲಾಖೆ, ಬೆಂಗಳೂರು - ಮಾಹಿತಿಗಾಗಿ ಹಾಗೂ ಇಲಾಖೆಯ ವೆಬ್‌ಸೈಟ್‌ನಲ್ಲಿ ಪ್ರಕಟಿಸಲು ಕ್ರಮವಹಿಸುವುದು.

ಪ್ರತಿಯನ್ನು ಮಾಹಿತಿಗಾಗಿ:

- 1) ಮಾನ್ಯ ಉನ್ನತ ಶಿಕ್ಷಣ ಮಂತ್ರಿಗಳ ಆಪ್ತ ಕಾರ್ಯದರ್ಶಿಗಳು, 3ನೇ ಮಹಡಿ, ವಿಧಾನಸೌಧ, ಬೆಂಗಳೂರು.
- 2) ಮಾನ್ಯ ಸರ್ಕಾರದ ಅಪರ ಮುಖ್ಯ ಕಾರ್ಯದರ್ಶಿಗಳ ಆಪ್ತ ಕಾರ್ಯದರ್ಶಿಗಳು, ಶಿಕ್ಷಣ ಇಲಾಖೆ (ಉನ್ನತ ಶಿಕ್ಷಣ), ಕರ್ನಾಟಕ ಸರ್ಕಾರದ ಸಚಿವಾಲಯ, ಬಹುಮಹಡಿಗಳ ಕಟ್ಟಡ, ಬೆಂಗಳೂರು-560001.
- 3) ಆಯುಕ್ತರ, ನಿರ್ದೇಶಕರ, ಮುಖ್ಯ ಆಡಳಿತಾಧಿಕಾರಿಗಳ ಆಪ್ತ ಶಾಖೆಗೆ, ಕೇಂದ್ರ ಕಛೇರಿ, ಕಾಲೇಜು ಶಿಕ್ಷಣ ಇಲಾಖೆ, ಬೆಂಗಳೂರು.
- 4) ಮ್ಯಾನೇಜರ್/ಅಧೀಕ್ಷಕರು, ಯೋಜನೆ ವಿಭಾಗ, ಕೇಂದ್ರ ಕಛೇರಿ, ಕಾಲೇಜು ಶಿಕ್ಷಣ ಇಲಾಖೆ, ಬೆಂಗಳೂರು.
- 5) ಕಛೇರಿ ಪ್ರತಿ.
- 6) ಹೆಚ್ಚುವರಿ ಪ್ರತಿಗಳು.

Proceedings of the meeting of technical Advisory Panel (TAP) held under the chairmanship of Additional Chief Secretary to Government, Higher Education, at 03.00 p.m. on 8th November 2016 at the Office of the Additional Chief Secretary(Higher Education), MS Building, Bangalore.

Members Present:

1. Sri. Bharat Lal Meena, I.A.S, Additional Chief Secretary to Government, Higher Education Department, Bangalore - Presided
1. Dr. Ajay Nagabhushan M.N, I.A.S, Commissioner, Department of Collegiate Education, Bangalore.
2. Sri. H. U. Talawar, Director, Department of Technical Education, Bangalore.
3. Shri. S. Ramanathan, Head – CND, Computer Information Group, ISRO Satellite Centre, Bangalore.
4. Shri. B. Vinaya, State Informatics Officer & Senior Technical Director, NIC, Bangalore.
5. Shri. Shivakumar Talwar, Senior Programmer, E-Governance Secretariat, Bangalore
6. Shri C. Thangavel, Technical Director, National Informatics Center, Bangalore
7. Dr. Bhagyavana S. Mudigoudra, Convener, E-governance, Education Department (Higher), Bangalore.
8. Director, Planning Department (M&E), Bangalore.
9. Deputy Secretary to Govt. (Planning) Education Department, Bangalore.
10. Shri A M Bhojedar, Joint Director, Plan, DTE, Bangalore
11. Shri H Renuka Prasad, Assistant Director, Plan, DTE, Bangalore
12. Dr. Ramesha Reddy N, Informatics officer, Department of Collegiate Education, Bangalore.
13. Shri Srinivas V, Coordinator, E-Governance Unit, Department of Technical Education, Bangalore.

The Additional Chief Secretary to Government, Higher Education Department welcomed all the members present in the meeting and briefly explained the ICT initiatives in the Department of Higher Education and also Proposal submitted by Department of Technical Education and Department of Collegiate Education. He informed the members that the scope of this meeting is only to accord technical sanctions for the hardware and software.

E. Supporting Autonomous Colleges with ICT Facilities

Commissioner for collegiate Education explained that, UGC has granted autonomous status for 15 Government First Grade Colleges with effect from the academic year 2016-17 and these Colleges will function independent of Universities. He explained that, these Colleges required ICT facilities for proper functioning and effective administration and steps will be taken equip in phase wise. In 2016-17 and with available budget it decided to provide ICT facilities to 05 Government First Grade Colleges with autonomous status as listed in following table.

After detailed discussions the committee approved the proposal with quantities and specifications mentioned in table.

Sl. No.	Name of the Activity	Name of the Item	Quantity, per College	Specification
1.	Board Room/ Auditorium with Audio system, digital Lectern, UPS, Video Conference System	A. Conference Audio System	1	Annexure-3
		B. Digital Lectern (Electronic Podium with Audio and Touch Screen)	1	Annexure-3
		C. Desktop Video Conference System	1	Annexure-3
		D. Document Camera	1	Annexure-3
		E. All-in-One Desktop Computer	1	Annexure-1(H)
		F. Big Format Display – 75”	1	Annexure-3
		G. UPS-1(3 KVA, 30 minutes backup	1	Annexure-3
		H. Multi Function Printer, A4 size	1	Annexure-1(E)
		I. Barcode label Printer and Scanner – Standard Type	2	Annexure-3
		J. Network-attached storage – 2TB	2	Annexure-3
2.	Diesel generator	A. DG Set – 30 KVA	1	Annexure-3
3.	College Office – Administration and Examination Management, and for Maintaining College Web-portal	A. Desktop Computer	5	Annexure-1(I)
		B. Laptop Computer	2	Annexure-1(B)
		C. UPS - 3 KVA, 30 minutes backup	1	Annexure-3
		D. All-in-One Laser Printer (Print, Copy and Scan), A3 Size	1	Annexure-1(L)
4.	Security and Surveillance System	A. 40” Video monitors	2	Annexure-3
		B. CC Camera	12	Annexure-3
		C. DVR with storage	2	Annexure-3
		D. Biometric Enabled Access control with Anti-theft Siren for Strong Room	1	Annexure-3
5.	Computerization of Activities Pertaining to Examination, Evaluation and Results	A. Midrange Server computer	2	Annexure-1(C)
		B. Desktop Computers	5	Annexure-1(I)
		C. OMR Scanner	2	Annexure-3
		D. Answer Script scanner	1	Annexure-3
		E. ADF Scanner	2	Annexure-1(R)
		F. UPS - 10 KVA, 30 minutes backup	1	Annexure-3
		G. High Speed Copier/ Printer	2	Annexure-1(U)

6.	Computerized Answer Script Evaluation cum Computer Centre	A. Desktop Computer	20	Annexure-1(I)
		B. UPS - 5 KVA, 30 minutes backup	1	Annexure-3
7.	Networking	A. Wired LAN	1	Annexure-3
		B. Campus Wi-Fi	1	Annexure-1(T)

Technical Specifications approved in 8th November 2016 TAP meeting

A. UPS: 5 KVA/ 7KVA/10 KVA On-line UPS

Type	Online
Capacity	5 KVA/ 7KVA/10 KVA
Backup Time	2 Hrs/4 Hrs.
Input Frequency	50 Hz +/- 5%
Input Voltage	160 V - 270 V (3 phase 380-460 V for 10 KVA)
Output Voltage	230 V +/- 1% V
Output Frequency	50 Hz +/- 0.2 Hz.
Input Power Factor	> 0.9
Power Factor	0.8 lag to unity PF
Waveform	Pure Sine Wave
Alarm	On Battery, Low Battery, UPS Over Load
Technology	IGBT based PWM technology with isolation transformer
Computer interface	Software with communication interface for monitoring the health of the UPS. Automatic shutdown under Windows 2000, Windows 98/XP (Prof) & Diagnostics.
Battery make	brands: Panasonic /Southern/Prime/Racket/ YUASA / Exide / CSB/Amaron/Relicell/ SF Sonic (ISO/TUV Certified)
Battery Type	Tubular (3-10 rating only)
Battery AH	Compatible
No. of Batteries	Compatible
DC Voltage (input)	Compatible
VAH	Appropriate
Over Load Capacity	150% for 1 minute, 125% for 10 minutes
Inverter Efficiency	90%
Overall Efficiency	85%
Crest Factor	3:1
Regulation	+/- 1%
Switching Frequency	Above 20 KHz
Warranty	5 years on site comprehensive including batteries
Protection	Automatic discharge protection with self-test features, Over Load, Surge protection, Input fault, Cold Start, Low battery, Battery over charge, Output short circuit, Charging current circuit, Inverter over temperature

LCD Display	Output voltage, Output current/Load %, Output frequency, Input Voltage, Battery Voltage
Load Test	At 100% load on Resistive load
THD	< 3% for Linear, < 5% for Non-linear Load
Certification	ISO 9001:2000 & ETDC / CPRI test report

B. Notebook Computer

Processor	Intel Core i5-4200M processor (Dual core 1.60GHz, 3MB) or AMD A10-7300 (Quad core 1.90 Ghz, 4MB) or equivalent or higher
Chipset	OEM mother board supporting above mentioned processor or equivalent or higher
RAM	1*4 GB DDR3 RAM expandable up to 8GB
Storage	256GB solid state drive
Graphics	Integrated Intel HD /AMD Graphics-Integrated in processor or equivalent
Display	13.x/14.x" TFT Display
Ports	2*USB ports (at least one v2.0 USB port) , 1*DC-in, 2*Audio Jacks, 1*VGA port/ HDMI port, Card Reader
Connectivity	Integrated WLAN 802.11 b/g/n, Wireless Display and Bluetooth
Keyboard and Touchpad	Keyboard with Backlit Keys for better visibility, Multi-touch touch pad, Bluetooth Mouse
Optical Drive	DVD RW Internal/ External
Operating System	Microsoft Windows 10 professional preloaded.
Certification	Energy Star 5.0, Windows 8, ISO 9001:2008 certificate for OEM
Battery backup	Minimum 7.0 Hours
Weight	< 1.3 Kg including battery
Warranty	5 years comprehensive onsite warranty (including batteries).
Carry case	Carry Case should be provided
Software	Anti-Virus with 3 year subscription (Preferred brands: Symantec Endpoint Protection / McAfee / eTrust / ESET NOD32) Microsoft Office 2013 Standard Academic/ Student Edition

C. Midrange Server Computer

CPU	One / Two Intel® Xeon® E5-2600 product family processor with 2.5MB per core Cache ; Proposed servers should have Minimum 2.0 Ghz and four Cores per CPU.
Motherboard	Intel® C600 Chipset
Memory	64 GB DDR3 Registered (RDIMM) memory operating at 1333MHz
Bays	Minimum 8 Hot Plug 2.5" hard disk bays / 8 Hot Plug 3.5" hard Disk Bays + CDROM/DVD Bay
Hard disk drive	3 X 300 GB SAS Hot plug 2.5" HDDs (preferably SSD)
Controller	SAS Raid Controller with RAID 0/1/1+0/6/6+0 with 256/512MB battery backed write cache (on-board or in a PCI Express slot).
Networking features	Dual Port Multifunction Gigabit Server Adapters (four ports total, Embedded or Slot based) with TCP/IP Offload Engine, including support for Accelerated iSCSI

Ports	USB 3.0 support With 5 total ports: (2) ports up front; (2) ports in back; (1) port internal
Bus Slots	Min. Five PCI-Express slots (1 x16 PCIe Slot & 4 x8 PCIe Slots)
Optical Drive (Internal /External)	DVD/CD-RW combo drive
Power Supply	Redundant Power Supplies
Fans	Redundant Fans
Compliance	FCC Class A, RoHS, CSA
OS Support	Microsoft Windows Server, Red Hat Enterprise Linux (RHEL), SUSE Linux Enterprise Server (SLES), Oracle Enterprise Linux (OEL), VMware, Citrix XenServer
Warranty	3 year comprehensive warranty. Pre failure warranty on CPU, Memory and Hard disks
Remote Manageability Software	System remote management software should support browser based Graphical Remote Console
Server Management	The Server Management Software should be of the same brand as of the server supplier.
	Should help provide proactive notification of actual or impending component failure alerts on critical components like CPU, Memory and HDD. Should support automatic event handling that allows configuring policies to notify failures via e-mail, pager, or SMS gateway or automatic execution of scripts.
	Should help to proactively identify out-of-date BIOS, drivers, and Server Management agents and enable the remote update of system software/firmware components.
Server Software	<ul style="list-style-type: none"> • OS: <ul style="list-style-type: none"> ○ Microsoft Windows Server 2016 • Database Server: <ul style="list-style-type: none"> ○ MySQL Standard (Academic) • Server Monitoring Software • Windows Server Firewall Software

D. Colour Laser Printer – A4 size

Print method	Desktop full color A4 laser beam printer
Printing Method	Laser beam printing
Print Resolution	600 x 600 dpi
Print Margins	5 mm-top, bottom, left and right
Print Speed	A4: Colour up to 5 ppm
	Mono up to 20 ppm
First page out	13 seconds monochrome
	22 seconds colour
Warm-up time	Average 30 sec.
Max. resolution	1,200 x 600 dpi x 1 bit
Paper Input (Standard)	250-sheet cassette, 50-sheet multi-purpose tray
Paper Input (Option)	250-sheet cassette
Paper Output	125-sheet face down
Media Types	Plain paper, Recycled paper, Heavy Paper, Transparency, Coated Paper, Label, Index card, Envelope

Media Sizes	Cassette (Standard and optional): A4, B5, A5, Legal, Letter, Executive, Statement, Foolscap, 16K, Envelope DL, Envelope COM10, Envelope C5, Envelope B5, Custom sizes: Width 100 to 215.9 mm; Length 148 to 355.6 mm. Multi-purpose tray: A4, B5, A5, Legal, Letter, Executive, Statement, Foolscap, 16K, Envelope DL, Envelope COM10, Envelope C5, Envelope Monarch, Envelope B5, Index Card, Custom sizes: Width 76.2 to 215.9 mm; Length 127.0 to 355.6mm.
Paper weights	Plain paper (60 - 90 g/m ²)
	Recycled paper (60 - 90 g/m ²)
	Thick paper 1 (91-163 g/m ²)
	Thick paper 2 (164 - 209 g/m ²)
Double Sided Printing	Automatic
Memory	16 MB
Processor Speed	80 MHz ASIC (PA20)
Print Language	GDI
Interface	USB 2.0
Operating Systems Compatibility	Windows 7/8/10

E. Monochrome Duplex Laser Printer

Machine Type	Desktop Printer / Copier / Scanner
Minimum Printing Speed (Monochrome)	25 pages/min.
Print Resolution	Default mode: 2400 dpi × 600 dpi High Quality mode *1:2400 dpi × 1,200 dpi Enhanced mode *1: 2,400 dpi equiv.
First Print	Less than 10seconds
Toner Cartridge yield (Minimum)	10,000 Pages
Paper Weight	64g/m ² to 90g/m ²
Paper Input	
Standard Cassette	250 sheets
Paper Output	
Face-down	100 sheets
Automatic Duplex Printing	Yes
Memory	32 MB or Higher
Interface	Ethernet (10BASE-T / 100BASE-TX / 1000BASE-T), USB 2.0, USB Host, IEEE1284 (Opt.)
Standard	USB 2.0
Networking Capability	Yes
Operation	Should be able to be operate on 500 VA UPS Power backup

F. Multi-Function (Print, Scan, Copy) Laser Printer

Features	SPECIFICATIONS	
Multifunction device	Print, copy, scan	
Speed-copy, print-a4 size	Up to 28 ppm; Up to 30ppm (letter),	
First print speed	< 10 seconds TTFP	
Warm-up Time from sleep	7sec or less	
First Copy Time	11sec or less	
Print resolution	Resolution 1200 x 600 dpi : 2400dpi x 600dpi (HQ1200)	
Memory	64 MB standard	
USB	USB 2.0	
Paper capacity	Input std / min Sheets: 250	
Voltage	220-240V, 4.5A, 50/60Hz	
Power Consumption	Maximum	1080W
	Average During Printing	445W
	Average During Standby	55W
	Average During Sleep	1.5W
Toner Cartridge type and Yield	Toner Cartridge without Smart Chip, 2000 Print Cartridge Yield (Minimum)	
Operation	Should be able to be operate on 500 VA UPS Power backup	

G. Document Scanner

Scan resolution, optical:	Minimum 1200 dpi
Bit depth:	48-bit
Levels of gray scale:	256
Task speed:	<ul style="list-style-type: none"> • 10 x 15 cm colour photo to file: Less than 30 sec • OCR A4 text page to Microsoft® Word®: Less than 50 sec
Scan size (flatbed):	Minimum 21 x 29 cm
Media types:	Paper (plain, inkjet, photo, newsprint, magazine articles), transparencies, 3-D objects
Scan file format:	Windows®: BMP, JPEG, GIF, TIFF, TIFF Compressed, PNG, PCX, PDF, PDF searchable, RTF, HTM, TXT
Connectivity:	Hi-Speed USB 2.0
Warranty:	3 Years comprehensive Onsite

H. All-in-One Desktop computer

1	Processor	6th Generation Intel(R) Core(TM) i3-6100U Processor (3M Cache, 2.30 GHz) AMD Phenom II X4 965equivalent or higher
2	RAM	4GB Single Channel DDR3L 1600MHz
3	HDD	1TB 5400 rpm Hard Drive
4	Graphics	Intel HD Graphics

5	Monitor	23.8-inch FHD (1920x1080) Anti-Glare LED-Backlit Display with Wide Viewing Angle (IPS)
6	Keyboard and Mouse	Wireless Keyboard and Mouse (QWERTY)
7	Ports	(2) USB 3.0, 4:1 MCR, (1) Microphone/Headset jack (2) USB 2.0, RJ-45, Audio Line Out, DC power 4 in 1 Media Card Reader (SD, SDHC, SDXC, MMC)
8	Wireless Solution	802.11ac + Bluetooth 4.0, Dual Band 2.4&5 GHz
9	Optical Drive	Tray load DVD Drive (Reads and Writes to DVD/CD)
10	Operating System	Microsoft Windows 10 professional preloaded.
11	Certification	Energy Star 5.0, Windows 8, ISO 9001:2008 certificate for OEM
12	Power	65 Watt AC Adapter, 100 - 240 V AC, 50-60Hz
13	Power Management :	Screen Blanking, Hard Disk and System Idle Mode in Power On, Set up Password, Power supply SMPS Surge protected.
14	Warranty	5 years comprehensive onsite warranty
15	Software	Anti-Virus with 3 year subscription (Preferred brands: Symantec Endpoint Protection / McAfee / eTrust / ESET NOD32)
		Microsoft Office 2013 Standard Academic/ Student Edition or higher

I. Desktop computer

1	Processor	Core i5 4570 3.2 GHz, 4 Core & 4 Thread, AMD A8-6500T APU equivalent or higher
2	RAM	4 GB DDR 3 @1600MHz
3	Chipset	Q87 or equivalent
4	HDD	1 TB HDD @7200 RPM
5	Graphics	Intel HD Graphics
6	Monitor	20" TFT/LED TCO 5
7	Keyboard and Mouse	USB KBD and Optical Mouse
8	Ports	6 USB Ports and 2 of 3.0, 9-pin serial port
9	Wireless Solution	802.11ac
10	Optical Drive	DVD Drive (Reads and Writes to DVD/CD)
11	Network	10/100/1000 with remote boot, wakeup, system installation
12	Operating System	Microsoft Windows 8 /10 with one touch recovery
13	Certification	Energy Star 5.0, Windows 8 / 10 ISO 9001:2008 certificate for OEM
14	Power	<300 watts SMPS
15	Security Features	Power-on password Administrator password Hard disk password Boot sequence control Boot without keyboard and mouse Serial port

		I/O control Individual USB port disablement
16	Warranty	5 years comprehensive onsite warranty
17	Software	Anti-Virus with 3 year subscription (Preferred brands: Symantec Endpoint Protection / McAfee / eTrust / ESET NOD32)

J. Duplex Scanner – A4 size

Sl.No.	Particulars	Details
1	Scanner type	Sheet fed
2	Digital sending standard features	Local or network folder; e-mail; SharePoint 2007 & 2010; Office 365; Cloud destinations; Google Drive; SkyDrive; Box; Dropbox; Evernote; SugarSync; FTP; printer; fax; user-defined command-line application; web folder
3	Scan resolution, optical	Up to 600 dpi
4	Duty cycle (daily)	Daily duty cycle: 2000 pages
5	Levels of grayscale	256
6	Multifeed detection	Yes, ultrasonic
7	Media types	Paper (plain, inkjet), envelopes, labels, cards (business, insurance, embossed, plastic ID, credit)
8	Scan file format	PDF (image-only, searchable, MRC, PDF/A, encrypted), TIFF (single page, multi-page, compressed: G3, G4, LZW, JPEG), DOC, RTF, WPD, XLS, TXT, XML, XPS, HTML, OPF, JPG, BMP, PNG
9	Scan input modes	Control panel with Simplex or Duplex button, Scanning software
10	Scanner advanced features	<ul style="list-style-type: none"> • Scan to cloud (Google Drive, SkyDrive, Box, Dropbox, Evernote, SugarSyncs) • Scan to SharePoint, including SharePoint in Office 365, with column metadata • auto page size detection • auto color detection • auto orientation • auto straighten • auto blank page removal • auto separation of documents by barcode, blank page, number of pages, • metadata embedded in PDF file, included in separate XML file, and/or uploaded as SharePoint column metadata • Scanner maintenance events sent via email.
11	Automatic document feeder specification	<ul style="list-style-type: none"> • Standard, 50 sheets • Up to 25 ppm/50 ipm (b&w, gray, color, 300 dpi) • Single-pass duplex
12	Compatible operating systems	Windows 10, Windows 8, Windows 7, Windows Vista, Windows XP (SP3 or higher)
13	Connectivity	1 Hi-Speed USB 2.0

K. Laptop Computers for SC ST Students and teaching staff for capturing student class attendance and teaching through Smart Classes

Component	Specification
Processor	Intel Pentium /AMD A series processor, 2.2 Ghz or higher frequency, 2 MB Cache, Quad Core, 64 bit support, Launched in the year 2015 or later
Operating System	Genuine MS Windows-10 Professional License with latest service pack available in India at the time of delivery. (National Academic) on Shape the Future SKU offerrece by Microsoft to Government of Karnataka. Preload and pre-activate the OS.
BIOS	Permanently burn the Logo of Government of Karnataka as desired by the department in the System BIOS
Chipset	SOC
Main Memory	4 GB DDR 3 1333 MHz upgradable up to 16GB with 2 DIMM slots
LCD Display	14.0 -inch or higher LED Backlight LCD Display
Graphics	Processor compatible OEM HD Graphics
Hard Disk Drive	1 TB SATA HDD or higher
Camera	Web Camera
Connectivity	On board RJ45 10/100/1000 Mbps Ethernet controller
	Boot from LAN support
	WLAN : IEEE 802.11 b/g/n WLAN Module
	Built in Bluetooth v 4.0 or higher
Interface I/O Port	One RJ-45 jack for Ethernet
	One DC-in jack for AC adapter
	One Mic in
	One Speaker / Headphone-out jack
	One VGA port for External CRT
	One HDMI Port
	At least 2 USB 2.0 port, 1 USB 3.0
Audio	High Definition Audio standard support
	Build-in stereo speakers
	Built-in Microphone
Battery Pack	Standard Rechargeable 4 cell Li-Ion or higher
Power Management	Full feature ACPI power management standard : supports Stand-by and Hibernation power saving modes
	Wake on LAN from S3
AC adapter	Standard 3 pin power adaptor for India
Pointing Device	Built-in touch pad with scroll
Keyboard	Standard Qwerty Keyboard
Accessories	Power Cord & AC Adapter for India
Warranty	1 year comprehensive onsite warranty (including batteries)
Certification	Energy Star 5.0, Windows 8, ISO 9001:2008 certificate for OEM
Battery backup	Minimum 4.0 Hours

L. All-in-One Laser Printer (Print, Copy and Scan) - A3 Size

FEATURES	SPECIFICATIONS
Multifunction device	Digital Laser Multifunctional Device (without fax) with duplex copying and printing, scanner and networking duly trolley mounted, copier engine based.
Copy Size	A3
Speed-copy, print - a4 size	25 PPM
Print resolution	600 x 600 dpi (minimum)
Memory, RAM/ Hard Disk	1.2 / 20 GB standard
Interface	USB 2.0, Ethernet
Paper Tray	250 sheet tray capable of multiple copying up to 99 copies
Toner Yield	Minimum 30,000
Drum Yield	Minimum 13,0000
Magnification	1:400

M. Video Conference Setup

- Full HD 1080p video, H.264 hardware encoding support
- Good optics with Autofocus
- Low-light correction support
- USB 3.0 ready
- Tripod-ready universal clip suitable for laptops or LCD
- Built-in dual/stereo mics with automatic noise reduction
- Video conference Platform software

N. Ink Tank Printer;

Printing Method	Inkjet
Type	Single Function
Printing Output	Monochrome
Max Print Resolution (Mono)	1200 x 600 dpi
Duty cycle (monthly, A4)	8000 pages
First Print Out Time (Mono)	7 sec
Print Speed Mono	30 ppm
Duplex Print	Automatic
Power requirements	AC 100-240V, 50~60 Hz
Operating System	Windows XP, XP Professional x64 Edition, Vista, 7, 8, Mac OS X 10.5.8 or later
USB support	USB 2.0
Wireless Support	Yes, 802.11b/g/n

O. 600 VA UPS

Feature	Specifications
CAPACITY	
VA/	600VA/360W
INPUT Single Phase	
Voltage	230VAC
Voltage Range	140 300VAC
Frequency Range	> 40 (Auto Sensing)
OUTPUT	
Voltage	230VAC
Voltage Regulation (Batt. Mode)	+/- 10%
Frequency	50Hz
Frequency Regulation (Batt. Mode)	+/- 1 Hz
Output Waveform	Modified Sine wave
BATTERY	
Battery Type	12V7Ah x 1pc
Backup time at a PC load(120w)	15-20 minutes
Recharge Time	6 hours to 90% after complete discharge
TRANSFER TIME	
Typical	4 - 8 ms
INDICATOR	
AC Mode	Green lighting
Battery Mode	Green flashing
AUDIBLE ALARM	
Backup Mode	Sounding every 10 seconds
Low Battery	Sounding every second
Overload	Sounding every 0.5 second
Fault	Continuously Sounding
PROTECTION	
Full Protection	Discharge, overcharge, and overload protection
ENVIRONMENT	
Operating Environment	0- 40°C, 0 90 % relative humidity
	(non condensing)
Noise Level	Less than 40dB

P. Scanner - A3 size

- Flatbed Type Scanner
- 200 Page Automatic Document Feeder
- Black and White Scanning Speed 50ppm
- Colour Scanning Speed 100ipm
- Ultrasonic Double Feed Detection

- Track Scanned Documents
- Hardware Deskew
- ENERGY STAR Qualified Scanner
- Document Scan Software

Q. UPS 2 KVA 2 Hr Backup

SI No	Items	Specifications
01	Type	Online
02	Capacity	2 KVA
03	Backup time	2hrs
04	Input Frequency	50 Hz. +/- 5%
05	Input Voltage	160 V – 270 V
06	Output Voltage	230 V +/- 1% V
07	Output Frequency	50 Hz +/- 0.2 Hz.
08	Input Power Factor	> 0.9
09	Output Power Factor	0.8 lag to unity PF
10	Waveform	Pure Sine Wave
11	Alarm	On Battery, Low Battery, UPS Over Load
12	Technology	IGBT based PWM technology with isolation transformer
13	Computer interface	Software with communication interface for monitoring the health of the UPS. Automatic shutdown under Windows 2000, Windows 98/XP (Prof) & Diagnostics.
14	Battery make	Preferred: Panasonic/Southern/YUSA/Exide/CSB/Amarraj/Relicell
15	Battery Type	Tubular
16	Battery AH	Compatible with Capacity and Backup Time
17	No.of Batteries	Compatible with Capacity and Backup Time
18	DC voltage (input)	Compatible with Capacity and Backup Time
19	VAH	> 3200 VAH
20	Over Load Capacity	150% for 1 Minute, 125% for 10 Minutes
21	Inverter Efficiency	90%
22	Overall Efficiency	85%
23	Crest Factor	3:5:1
24	Regulation	+/- 1%
25	Switching Frequency	Above 20 KHz
26	Warranty	5 years on site comprehensive including batteries
27	Protection	Automatic discharge protection with self-test Features, Over Load, Surge protection, Input fault, Cold start, Low Battery, Battery over charge Output short circuit, Charging Current Circuit Inverter over temperature
28	LCD display	Output voltage, Output current, Output frequency, Input Voltage, Battery Voltage
29	Load Test	At 100 % load on Resistive load
30	THD	< 3% for Linear, < 5% for Non Linear Load
31	Certification	ISO 9001:2000 & ETDC /CPRI test report

R. ADF Scanner

Scanning: Automatic Document Feed, Duplex/ two sided scanning

Scan resolution, optical: Minimum 600 dpi

ADF: 50 sheets

Bit depth: 24-bit

Levels of gray scale: 256

Scan Speed: ADF, A4 size colour: 20 ppm

Scan size: Minimum 21 x 29 cm

Connectivity: Hi-Speed USB 2.0

S. Line Printer

Type	Matrix
Series	6600HD
Line Pitch Lpi	6, 8, n/20, n/180
Print Attributes	Bold, Underlined, overscore, superscript/subscript, double height, double width, proportional spacing, rotated, reverse, background, outline, expanded, (2x2), half width, shadow
Stationery	1 to 6 part, 56 to 163 GSM, upto 0.64 mm thickness
Accoustic	Pedestal: 62 dBA, Quietized: 52 dBA
Key Application	Barcoding, Invoices, Delivery Notes, Packing Lists, Crystal Reports, Labels
Dimensions	914 x 660x 546 mm
Paper Handling	Straight through paper path with easy-load dual adjustable tractors
Features	Clear And Precise Quality, Lowest Cost Laser Replacement, Longer Lasting Ink, Unmatched Reliability, Direct Epr Connection
Mtbf	10,000 Hrs at 25% duty Cycle & 25% page density
Energy Save Mode	14 Watts
Barcodes	double width, proportional spacing, rotated, reverse, background
Power Supply	AC 200-240V, 50 - 60Hz
Weight	75 Kg
Emulation	LQ-1600K, KS, KSSM
Printing Technology	Line Matrix impact printer, 136 column
Paper Type	Continuous, Fan folded, Edge-perforated
Fonts	Draft, Data Processing, Courier, Gothic OCR A and B
Graphics Resolution	180 x 180 dpi Horizontal (max)
Paper Feed Speed	20 Inches per sec

Character Pitch (cpi)	Double Byte: 5, 6, 6.7, 7.5, 10, 12, 13.3, 15, Single Byte: 10, 12, 13.3, 15, 17.2, 20, 24, 26.6, 30
Print Width	13.6 Inch
Interface	RS-232, Parallel: IEEE 1284 Centronics with Ethernet 10/100Base-T
Print Speed	Print Speed Uhs: Double Byte-365 Lpm, Single Byte-440 Lpm, Print Speed Hs: Double Byte-258 Lpm, Single Byte-365 Lpm, Print Speed Lq: Double Byte-177 Lpm, Single Byte-245 Lpm, Print Speed Nlq: Double Byte-195 Lpm, Single Byte-275 Lpm

T. Wi-Fi setup

Wi-Fi switch: Port 4/8/16/24	
Wi-Fi router: 2x2 MIMO Wireless Access Point/Router	
1	WAN Set up Typical Elements & List of work for WAN is mentioned below
2	Wireless Outdoor Units: Integrated/External 24 dBi antenna connectivity and PoE support, IEEE
3	802.11 b/g/n support - 2.4 GHz, Support to 100-200 meters Data rate : up to 300 Mbps, Upto 500 MW transmitted power, MIMO Technology 2x2
4	Indoor Wireless Unit- Wireless 802 b/g std support
5	Option : Dual polarized sector Omni antenna
6	Three year service support as per manufacturer defined terms for BASE unit
7	CAT 5 Cable, green PVC and laying
ADSL standards:	
<ul style="list-style-type: none"> • Flash: 2MB; SDRAM: 16MB • Antenna: One fixed dipole 2dBi antenna • Power ON/OFF switch • WPS and WLAN On/Off switch • Reset switch • 1 x RJ11 interface for ADSL Line • 4 x 10/100 Mbps UTP LAN ports • Ethernet Networks • Necessary Cables and Connectors, along with required Switches and other accessories 	

U. High Speed copier/Printer

Sl. No.	Particulars	Specification
1	Printer Type	Laser
2	Printer Resolution	600 x 600 dpi or higher
3	Copy / Print Speed	45 ppm or higher
4	Memory	256 MB or higher
5	Trays	Standard: 2 x 550 sheets paper capacity
6	Multiple Copies	1 to 999 sheets
7	Duplex Printing	Required
8	Network Port	Required

9	Media Size	A3, A4, Legal, Letter, Folio, Executive
10	Toner Yield	19000 sheets or Higher
11	Connectivity	USB 2.0 , Ethernet (100Base-TX / 10Base-T)
12	OS Compatibility	Window XP Professional, windows 7 Professional, Windows 8 Professional
13	Warranty	Three years

V. Replacement Batteries for 5 KVA UPS

Battery AH	100 AH
Battery Type	Tubular, C-10 rating
Battery make	Preferred brands: Southern/Prime/Racket/ Exide / Relicell/ SF Sonic (ISO/TUV Certified)

W. Language Lab

Language Learning SW	Modules and Features as per the Language Lab Sub-committee decision
Desktop Computer	Desktop Computer - TYPE 1 (Annexure 2)
Head Set	Good quality Headset with microphone (Proffered brands – Logitech, Plantronics, Creative, Sony, Shenhaier)

X. Tablet

NETWORK Technology	GSM / CDMA / HSPA / EVDO / LTE
Display	9.7 inch or 12.9 inch, 260 ppi, Multi-Touch, Scratch-resistant, capacitive touchscreen, 16M colors
Weight	800 g
Stylus/ Pencil	Yes
OS	iOS 9, upgradable to iOS 10.1
CPU	Dual-core 2.26 GHz
MEMORY, Internal	128 GB, 4 GB RAM
Camera, Primary	8 MP, autofocus
Loudspeaker	Yes, with stereo speakers
3.5mm jack	Yes
Mic	Active noise cancellation with dedicated mic
WLAN	Wi-Fi 802.11 a/b/g/n/ac, dual-band, hotspot
Bluetooth	v4.0, A2DP, EDR
GPS	Yes, with A-GPS, GLONASS
NFC	NFC
USB	v3.0
Sensors	Fingerprint, accelerometer, gyro, compass, barometer
Battery	Li-Ion 10,000 mAh battery
Camera	Photo / Video
Model	Pro Model with Smart Keyboard (WiFi+Cellular)
Carry Case and Others	Smart Flip Foldable Cover, Carry Case

Y. Multimedia Projector

Display System	LCD/ DLP
Native Resolution	WUXGA - 1920 x 1200
Format	NTSC 3.58, 4.43; PAL 60, M, N; SECAM
Brightness	5000 Lumens
Contrast Ratio	2000:1
Zoom	1.5x or more
Ceiling Mountable	Yes
Rear Screen Projection	Yes
Inputs/Outputs	1x HDMI Video (Input); 1x 15-pin VGA Video (Input) 1x 15-pin VGA Video (Output); 1x RCA Composite Video (Input); 1x
Additional Requirements:	
5 meter Power Cable, 5 meter VGA Cable, 5 meter HDMI Cable, Suitable Ceiling Mount and Good quality 8ft x 6ft insta-lock Projector Screen and tripod stand, Suitable spare Lamp	

ICT Facilities for Autonomous Colleges

1. Board Room/ Auditorium with Audio system, digital Lectern, UPS, Video Conference System		
A. Conference Audio System		
Sl. No.	Particulars	Specification
1	Amplifier	
	Line Output	17.5V DC/3A Max.; -34dBV (20mV)
	Power Output	50W RMS at 2% THD, 90W Max.
	Inputs	1×Mic 1.0mV/2k Ω (Balanced), 2×Mic 0.65mV/4.7k Ω (Unbalanced), 1×Aux 100mV/470k Ω (Unbalanced)
	Frequency Response	60-14,000Hz (\pm 3dB)
	S/N Ratio	> 60dB
	Tone Controls	Bass: -10dB at 100Hz, Treble: -10dB at 10kHz
	Preamplifier / Rec Output	200mV/600 Ω
	Line Output	1V/1k Ω
	Send Output	200mV/600 Ω
	Return Input	200mV/10k Ω
	Speaker Output	4 Ω , 8 Ω , 16 Ω , 70V & 100V
	Power Requirement	AC: 220-240V, 50/60HZ, DC: 24V (2×12V Car Battery)
	Power Consumption	250VA
	Protections	AC Fuse 1×3 Amp , DC Fuse 2×10 Amp
Accessories	1× Connection Cable CC-46, 1× Extension Cable CC-47, 1× Fuse 3 Amp, 1 × Fuse 10 Amp.	
2	Chairman Unit	

	Microphone	-63dBV/ μ bar, (7.5mV/Pa)
	Current Consumption	< 50mA Max.
	Input	Line
	Output	Line, Headphone with Volume Control
	Speaker	Max Input 300mW Impedance 16 Ω
	Controls	Priority Switch, Talk Switch, Speaker Volume Control, Headphone Volume Control
	Accessories	Foam Windshield, 2.5m Interconnecting Cable
3	Cordless Mic	
	RF Output Power	10mW (Max.)
	Modulation Mode	FM
	Microphone Element	Dynamic, Cardioid
	Frequency Response	40Hz-13kHz
	Power Requirement	9V Battery
	Controls	ON/MUTE/OFF Switch
Indication	Red LED: Momentary glow for RF ON & Permanent glow for Low Battery	
4	Receiver	
	Audio Output	0-50mV
	S/N Ratio	>80dB
	Distortion	<0.5%
	Antenna Type	Telescopic
	Power Requirement	220V-240V AC 50Hz for AC adaptor (supplied along with)
	Controls	Power Switch, Output Volume Control
	Indication	Red LED for Power ON, Green & Red LEDs for Signal
	ACCESSORIES	Connection Cable, AC Adaptor, 9V Battery
5	Wall mount Speaker	
	Input Power	16W RMS / 24W Max.
	Rated Voltage	100V
	Power Taps on 100V	16/8/4W
	Low Impedance	8 Ω
	Frequency Response	85-20,000Hz
	SPL at 1kHz (1W/1m)	86dB
	Speakers	Woofers & Tweeter
B. Video Conference System		
Sl. No.	Particulars	Specification
1	Package should include:-	Full HD 1080p camera, codec, microphone array, cables and remote control
	Following Video standards and Protocols should be supported:	H.263, H.264, H.264 MPEG- 4AVC/ H.264 MPEG-4 with Annex –G (scalable video coding)
		H.239
		H.263 & H.264 Video error concealment
2	Video Input	It should have 1X Full HD camera as Input HDCI/HDMI port.
		# It should have 1X DVI/HDMI port along with PC

		audio sharing.
3	Video Out	It should have at least 2X HDMI/DVI or /equivalent port to connect displays.
4	Following Video Resolution should be supported	1080p @ 60fps, 1080p @ 30fps, 720p @ 60fps, 720 @ 30fps, 4SIF/4CIF @ 60fps, 4SIF/4CIF @ 30fps, SIF(352X240), CIF(352X288), QSIF (176X120), QCIF (176X144)
5	Following input and output content Video Resolution should be supported:	Input: up to 1920X1080p
		Output : up to 1920X1080p
		The content frame rate of 5-30fps (up to 1080p resolution at 30fps) should be supported
		It should be possible to do content sharing during a VC call
6	Following camera specification should be met:	Full HD 1080p 60fps
		1920X1080p CCD/CMOS imager
		Optical Zoom – 10X or more
		Field of view 70 degree
7	Following Audio Input ports should be available on the codec:	It should support total of 2 microphones
		It should also have 1X 3.5mm stereo line in port
8	Following Audio output ports should be available on the codec:	It should have at least 1X 3.5mm Stereo line out port
		It should have at least 1X HDMI port
9	Other Interfaces	At least 1X USB 2.0/1RS232 Mini-Din 8 pin port
10	Following Audio standards and protocols should be met:	G.711, G.722 or equivalent or better
		It should support automatic gain control
		It should support automatic noise suppression
		It should support automatic noise reduction
		It should support Instant adaptation echo cancellation
		It should have audio error concealment
		It should support lost packet recovery or equivalent technology
Support G.711, G.722 or higher or equivalent		
11	Following other supported standards should be supported:	H.224/H.281/H.323 Annex Q. H.225, H.245, H.239, H.241, H.235
12	Following network parameters should be supported	It should have at least 1X 10/100/1G Ethernet
		It should support H.323 and / or SIP up to 6Mbps
		It should support reconfigurable MTU size
		It should support RS232/USB with API
		It should support Microsoft office communications server integration/ It should support Microsoft Lync 2010
		It should also support IBM sametime
13	Following security specifications should be supported:	(a) Should support AES 128-bit
		(b) Authenticated access to admin menus, web interface and telnet
14	It should have Internal Multipoint license for up to 3 sites (HDCP)	
15	It should be possible to integrate a conference phone (optional)	

16	It should be possible to integrate a Audio mixer through a digital interface or equivalent interface.	
17	Languages should support English to display the participants name on screen.	
18	Standard operating voltage/power specifications should be complied:	100-240VAC, 50-60Hz
19	Following Environmental specification should be met:	a. Operating temperature: 0-45°C
		b. Operating humidity : 15-80%
20	Each endpoint shall be QoS enabled to ensure optimum video and audio quality <ul style="list-style-type: none"> • Should support packet-loss based down speeding or equivalent • IP DiffServ (If Applicable) 	
21	Point to Point conference call between VC end points should not consume MCU port	
22	Endpoint should be both "IPv4 and IPv6 ready"	
C. Document Camera		
Sl. No.	Particulars	Specification
1	Sensor Size in mm	1/2.7" CMOS or better
2	Number of Pixels	2 Megapixel
3	Crop Factor/ Zoom	7x Optical, 10x Digital or better
4	Focus	Auto
5	Sensor	CMOS
6	Memory Card	YES
7	Head Rotation	Horizontal 180°
8	Lens Rotation	Vertical 180°
9	Lighting	Built-in LED lamp
10	Live View	YES
11	Interface	USB, VGA
12	Video Mode	720 p image
D. All-in-One Desktop Computer		As in Annexure - H
E. Big Format Display - 75"		
Sl. No.	Particulars	Specification
1	Display	
	Screen Size	75"
	Panel Technology	120Hz LED BLU
	Native Resolution	1920x1080 (16:9)
	Brightness (Max)	320 nits
	Contrast Ratio (Typical)	4000:1
	Viewing Angle	178° / 178°
	Orientation	Landscape / Portrait
	Response Time	4ms
	Input	Video:VGA (D-Sub 15 Pin), DVI-D, Component/Composite, HDMI Audio: Stereo Mini Jack
2	Connectivity	
	Output	Audio: Stereo Mini Jack
	External Control	RS232C (In/Out) thru Stereo Jack
	External Sensor	Yes

	Power Supply	AC 100 - 240 V~ (+/- 10 %),50/60 Hz
3	Power Consumption	247W Typical / 360W Max
	Power Consumption (Standby)	< 1W
	Operating Temperature	0°C~ 40°C
4	Environmental Conditions	
	Operating Humidity	10~80%
	Special	Built in Speaker (10W + 10W), PIP/ PBP, Narrow Bezel, Light Weight, RS232 In/Out, 1 D-Sub & 1 HDMI
5	Features	
	VESA Standard Wall Mount	400 x 400mm
6	Dimensions	
	Packaging Dimension (W x H x D)	72.9" x 43.3" x 19.2"
	Bezel Width	10.9mm (Bottom 16.9mm)
	Product Weight	63.5 lbs.
7	Weight	107.6 lbs.
	Standard Warranty	3 Year Onsite Parts/Labor
8	Service	
	Included	Quick Setup Guide, Warranty Card, D-Sub Cable, Power Cord, Remote Controller, Batteries
9	Accessories	
	Optional Stand	WMN4675MD
	Optional Mount	STN-L75E
	Optional Media Player	PIM-BD7, PIM-BQ7P
	Emission Standard	EMC
10	Green Management	
	RoHS Compliant	Yes
	Packaging Recyclability	Yes
2. Un - Interrupted Power - Diesel Generator		
A. DG Set 30 KVA		
Sl. No.	Particulars	Specification
1	DG Set	
	Rating (KVA):	30
	Rated KW:	24
	Rated Current (Amps):	42
2	Engine	
	BHP:	43
	No. Of Cylinders:	4
	Air Filter:	Dry type
	Fuel:	HSD
	Type of oil:	15w 40 CH4
	Cooling:	WC/Radiator/Force Cooled
	Coolant Capacity with engine Jacket (Ltrs):	14.5
	Engine Dry Weight (Kgs):	350
Electric Starting System:	12V	

3	Alternator	
	Type	Brushless
	KVA:	30
	Voltage (V) :	415
	No. of phases:	3
	Power factor:	0.8
	Speed (rpm) /Frequency (Hz):	1500/50
	Voltage Regulation	
	Enclosure:	SPDF
	Insulation class:	HSD
	Weight of AGG (Kgs):	210
4	Control Panel	
	Type:	With Microprocessor Based BLISS EAR Monitor / Inbuilt
	DG parameter monitoring display:	On Bliss Ear Monitor - Volts line & line to neutral , Amps,HZ,Kw,KWH,KVA,PF
	Engine parameter monitoring display:	On Bliss Ear Monitor - Oil pressure, Oil temp, Coolant temp, Fuel Level, Battery Voltage& Charging Status and Engine Speed
	Functions:	Manual Start/Stop, Emergency stop, Cooling time, LCD Display, Acknowledgement & Fault Reset
	Protection:	Short Circuit, Over load MCB, MCB's for control circuit.
5	Battery	
	Type:	Maintenance Free
	rating (AH) :	88
	Quality (Nos):	1
	Charging Facility:	Charging Alternator
	Battery metering:	Ammeter, Voltmeter built in BLISS Ear monitor
6	Exhaust System	
	Silencer type:	Residential
	Location:	Inside canopy in radiator duct.
	Exhaust pipe size in mm:	90
7	Fuel Tank	
	Type:	Drag type in base frame
	Capacity (Ltrs):	75
8	Canopy	
	Type:	Drag type in base frame
	Sheet Metal:	Forced
	Draft:	Forced
	Insulation:	FOAM
	Noise Level	75DB @ 1 Meter in line with CPCB norms
9	Other Items	

	Base Frame:	Pressed CRCA Channel
	AVMs Qty (Nos):	4
	Emergency Stop:	yes
	Internal Lights:	yes
	AMF Panel:	Automatic Change over switch within the generator
10	Warranty	
	One Year Warranty	One Year Warranty
3. Security and Surveillance System		
A. 40" Video Monitor		
Sl. No.	Particulars	Specification
1	Display	
	Screen Size	40"
	Panel Technology	60Hz LED BLU
	Native Resolution	1920x1080 (16:9)
	Brightness (Max)	350 nits
	Contrast Ratio (Typical)	5000:1
	Viewing Angle	178° / 178°
	Orientation	Landscape / Portrait
	Response Time	8ms
	Input	Video:VGA (D-Sub 15 Pin), DVI-D, Component/Composite, HDMI Audio: Stereo Mini Jack
2	Connectivity	
	Output	Audio: Stereo Mini Jack
	External Control	RS232C (In/Out) thru Stereo Jack
	External Sensor	N/A
	Power Supply	AC 100 - 240 V~ (+/- 10 %),50/60 Hz
4	Special	Built in Speaker (10W + 10W), PIP/ PBP, Narrow Bezel, Light Weight, RS232 In/Out, 1 D-Sub & 1 HDMI, No function key
5	Features	
	VESA Standard Wall Mount Interface	200 x 200mm
	Product Dimension Without Stand (W x H x D)	36.4" x 21.3" x 3.7"
6	Dimensions	
	Packaging Dimension (W x H x D)	39.6" x 24.2" x 6"
	Bezel Width	17.4mm (Bottom 20.4mm)
	Product Weight	20.5 lbs.
7	Weight	
	Shipping Weight	25.1 lbs.
	Standard Warranty	3 Year Onsite Parts/Labor
8	Service	
	Included	Quick Setup Guide, Warranty Card, D-Sub Cable, Power Cord, Remote Controller, Batteries
9	Accessories	

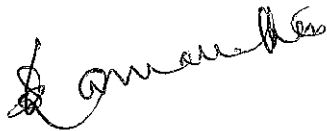
	Emission Standard	EMC
10	Green Management	
	ENERGY STAR 5.0 Compliant	Yes
	RoHS Compliant	Yes
B. CCTV Camera		
Sl. No.	Particulars	Specification
1	Camera Type	IR Array Led Bullet Camera
2	IP Rating	IP66
3	Signal System	PAL
4	IR Effective Distance	30~35M
5	Resolution	700TV Lines
6	Vertical & Horizontal Frequency	50/60 fields/sec
7	Clock Frequency	27MHz
8	Scanning System	Progressive Scanning
9	Lens	4/6 mm Lens
10	Auto Gain Control	Auto
11	Power Supply	DC12V±10%
12	Warranty	One Year Warranty
C. Digital Video Recorder (DVR) with Storage		
Sl. No.	Particulars	Specification
1	Video Compression	H.264 Compression, Dual codec
2	Video System	NTSC / PAL
3	Video Input / Output	VGA, HDMI & TV Output
4	Audio Compression	8kHz*16bit ADPCM
5	Audio Input / Output	RCA 1-channel input / 1-channel output
6	Display Frame Rate PAL	100fps / NTSC: 120fps
7	Playback Resolution	PAL :CIF(352x288), HD1(704x288), D1(704x576), NTSC: CIF(352x240), HD1(704x240), D1(704x480
8	Total Recording Frame Rate	PAL: 25fps @ D1, 50fps @ HD1, 100fps @ CIF / NTSC: 30fps @ D1, 60fps @ HD1, 120fps @ CIF
9	Recording Mode	Always / schedule(motion triggered)
10	Recording Pack	Time 15/30/45/60mins selectable
11	HDD Interface	1 fixed SATA HDD rack, support up to 1TB HDD
12	Storage Capacity	1TB SATA Storage
13	Network Interface	RJ45, 10M/100M
14	Network Protocol Support	TCP/IP, UDP, DHCP, DNNS, PPPoE
15	Network Function	Support to live view with IE (Internet Explorer) with Mobile phones
16	USB Interface	Yes
17	Playback	Playback 4/8 channels simultaneously
18	Playback Mode	Normal play, fast forward, fast rewind, frame by frame
19	Backup Methods	USB flash disk, USB disk, USB CD/DVD-RW & Network
20	Alarm Mode	Detection, Sensor triggered, video loss, HDD error
21	Power Supply	DC 12V/3A with power adaptor

22	Commissioning / Installation	Supplier scope with all necessary cables and accessories including HDD for storing video footage of minimum 15 days
23	No. of Channels	Minimum 16 Channels
D. Biometric Access Control System with Anti-theft Siren		
Sl. No.	Particulars	Specification
1	Verification Mode	1:1/ 1: N.
2	Verification Time	Less Than 1 Sec
3	Registration Time	Less Than 3 Sec
4	Log Data	32,768 entries Minimum
5	System Log	Min. 2000 entries to keep track of system history.
6	Display	128 x 64 Pixels
7	Interface	Ethernet 10/100 M, Auto crossing.
8	Keypad	10 numeric keys
9	Operating Temp	0°C ~65°C
4. Computerization for examination, evaluation and result		
A. Midrange Server		As in annexure- 1 (C)
B. OMR Scanner		
Sl. No.	Particulars	Specification
1	Reading Speed (per Hour)	3500 pages or above
2	Input/ Output	500 forms
3	Mark Writing Implements	Pencil (Infrared Ray)/ Pen and Pencil (Visible red ray Optional)
4	Read Technique	Reading Reflective Sensor
5	Mark Discrimination	256 degrees
6	Calibration	Automatic
7	Interface	USB 2.0/ RS-232C Serial Interface
8	Maximum Scan area	48 x 109
9	Barcode Reader (Horizontal)	JAN/ EAN/ UPC/ ITF/ CODE39/ EAN128/ CODE93
10	Barcode Reader (Vertical)	JAN/ EAN/ UPC/ NW7/ITF/ CODE39/ INDUSTRIAL2OF5/COOP2OF5
11	Utility Software	Required
12	Warranty	One year
C. Answer Script Scanner		
1 Size and Scanning Specifications		
Scan Area : A3 + - Up to 560mm x 370mm (open book), 280mm x 370mm (per page)		
Optical Resolution : 400ppi optical		
Maximum Book Thickness : up to 170mm		
Color Tone : 24bit color; 8bit grey; 1bit b/w		
File Formats : JPEG, TIFF, RAW, BMP,GIF, PDF, PDF OCR, XML		
2 Capture Technology Specifications		
36MP Dual CMOS Sensors capture system		
Carl Zeiss 50mm Macro Planar Lenses		

Easy to upgrade, exchange and maintain
3 Cradle Specifications
V-Shape minimum 80 degree book cradle with soft spine support
Automated pressure controlled book support flaps
Anti-slip mats for perfect stability
Anti-Glare Glass plate to flatten the pages and optimize curvature free scanning
Glass to be automated movement and pressure controlled
Easy change between modes - no second unit to scan covers or problematic pages or books.
4 Page Turning Specifications
Automated Bionic Finger system with secure page separation and turning
Nearly touch free: not more than 5 mm ² point of contact to the book
Double Page control system based on laser light measure tool
Every page to be measured with a light density sensor. Never turn more than one page
5 Light System Specifications
LED cold light with constant illumination
No UV emission
Easy to upgrade, exchange and maintain
6 Computer Specifications
Integrated Computer System with multicore processing, 4TB storage and 24 inch Flat Screen
Monitor
Integrated 64 bit Software for single and batch mode capturing, processing, image enhancement, on the fly OCR and workflow management
7 Other Specifications
table top system, easy to install, place and reposition
System should work around the book, leaving it in place, not stressing the binding, the pages or the covers
Easy to use Automated Operations, with minimum operator interference
A modular system, that in current form has a life expectancy of 10 years and parts availability of 12 years
Can be easily upgraded in time in terms of image quality
Fully customizable to suit project requirements

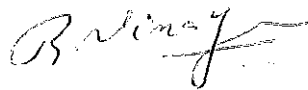
Committee taken a decision ; Wherever the approved hardware/ software configuration is not available, procurement may be made with a similar and suitable configuration without defeating the purpose of the hardware/ software.

The Chairman directed the CCE and DTE to procure all items approved as per KTCP, by inviting tender through e-procurement. The meeting concluded with thanks to the chair and all the members participated.



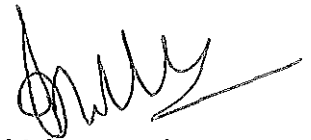
S. Ramanathan

Head, CND, Computer Information Group
ISRO, Bangalore



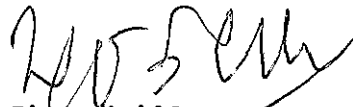
B. Vinaya

State Informatics Officer,
National Informatics center



Shivkumar Talwar

Senior Programmer
Department of e-governance



Bharat Lal Meena

Additional Chief Secretary to Government,
Higher Education Department